

# BUSINESS WEEK

**Negotiating Steel**

HOW IT LOOKS

PAGE 32

INDEX  
YEAR  
AGO



Hercules Powder's C. A. Higgins: New process, new field, new profits (page 66)

A MCGRAW-HILL PUBLICATION

**JAN. 19, 1952**



# Chemical Progress

News of developments from General Electric's Chemical Division that can be important to your business.



Salt-spray resistance of G.E.'s new alkyd resin is demonstrated in this photo. Both panels are coated with the same primer. The coating at the left, using an ordinary alkyd resin as a vehicle, is rusted and corroded. The right-hand coating, using G-E 7422, shows no ill effects after exposure.

## NEW G-E PAINT RESIN DRIES DUST-FREE IN ONLY MINUTES

A new General Electric Glyptal® alkyd resin, which air-dries dust-free in 5 to 10 minutes, and tack-free in 3 to 4 hours at 77 F, is among the recent contributions of G-E chemical research to the paint industry. The new resin (G-E 7422) is designed to expedite the painting and priming of many industrial and consumer goods.

G-E 7422 is economical, too! Fast baking, it permits shorter oven cycles . . . and it requires less amine resin addition than other Glyptals to get hard, mar-proof, yet flexible coatings. This paint resin is a medium, pure, oil-modified alkyd, free of rosin, phenolic, styrene or other modifiers. Exceedingly versatile, it is recommended for a variety of applications: appliance and furniture finishes, automotive and Venetian blind enamels, and as a primer for metal goods. It imparts excellent color retention, adhesion and toughness as well as humidity and salt-spray resistance to formulations.



**Plastics Desk Tops.** In line with the recent trend to plastics tops for school desks, G.E. has designed a G-E Textolite® color pattern with special reflectance and low-glare properties.

Tested and approved by leading lighting authorities, this surfacing is a result of G-E research in superior resins and varnishes for plastics laminating.

**New Glass-bonded Mica.** Bases for Klixon† Thermo-Snap controls are being molded of a new G-E mycalex grade developed through G-E chemical research. G-E mycalex gives the switch base high dielectric strength and temperature resistance (up to 700 F), molded-in inserts, and high dimensional stability which facilitates precision assembly.



† Reg. Trade-Mark, Spencer Thermostat Co.

For more details about any of the G-E chemical products mentioned on this page, just write to Chemical Division, General Electric Company, Pittsfield 11, Massachusetts.

© Reg. U. S. Pat. Off.

PLASTICS COMPOUNDS • SILICONES • INSULATING MATERIALS • GLYPTAL® ALKYD RESINS • PLASTICS LAMINATING, MOLDING, AND EXTRUDING

*You can put your confidence in*

**GENERAL  ELECTRIC**



t  
s  
n  
o.  
g  
r

h

A. Off.  
DING  
● ●





*Not-so-secret  
weapon...*

ONE of the most valuable defense weapons this country has is known to all the world. It's the biggest and most dependable telephone network on earth!—ready day and night to carry the calls that speed production and coordinate defense.

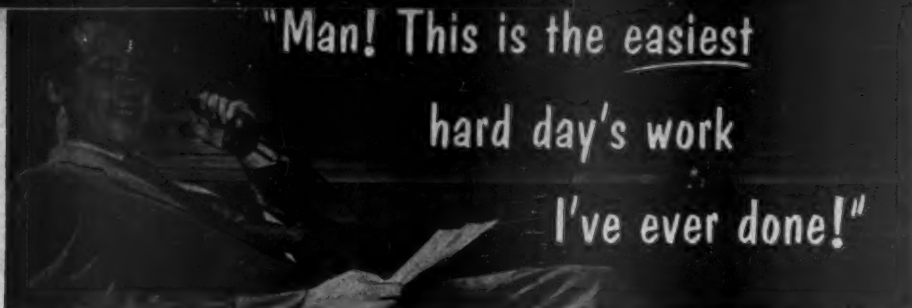
That didn't just happen. It's the result of constant teamwork between Bell Laboratories people who *design* telephone equipment, Western Electric people who *make* it and Bell Telephone people who *operate* it.

In Western Electric's regular job as manufacturing unit of the Bell System, we've gained a wealth of specialized experience which is also being applied to making military communications and electronic equipment needed by the Armed Forces.

**Western Electric**



MANUFACTURING AND SUPPLY UNIT OF THE BELL SYSTEM



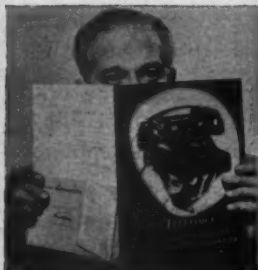
"Bless EDISON TELEVOICE! It gets me through a mountain of written work as easily as talking on the phone. I just pick up my TELEVOICE phone and talk. It's always connected to the recording instrument which my secretary keeps on her desk. I enjoy a direct line from thought to action!"



**1 girl serves 20 dictators!**  
Or more! Forget the secretary shortage--and begin to use secretarial capacity you never dreamed you had. TELEVOICE cuts instrument dictation costs as much as 66 2/3%. Just put a TELEVOICE station at every desk--and watch how fast the work flows out!



**Ideal running mate!**  
Famous DISC EDISON VOICEWRITER, with exclusive High-Definition recording, integrates perfectly with the TELEVOICE system for those who want or need a heavy-duty instrument all their own. For every dictating situation, you can always rely on EDISON!



**Eye-opening booklet!** Ideas and help by the bookful! And the whole sensational success story of TELEVOICE. Send for your copy--now! Or arrange demonstration by phoning our local representative. In Canada: Thomas A. Edison of Canada, Ltd., Toronto 1, Ontario.

## EDISON TELEVOICewriter

EDISON, 2 Lakeside Ave., West Orange, N. J.  
Okay--send me A LINE ON TELEVOICE

NAME \_\_\_\_\_  
TITLE \_\_\_\_\_  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

*The Televoice System*

*Thomas A. Edison*  
INCORPORATED  
Ediphone Division  
West Orange, New Jersey



## TELEVOICE SPEED SERVICE FOR OTIS AT 53% LOWER COST

**Up to 24 hours saved!** From the-spot inspection reports, General Service Manager's of (see photo below) of Otis Elevator Company writes detailed service instructions that keep more than 47,000 elevators running at performance.

Here, speed is essential. Thank EDISON TELEVOICE, dictated maintenance instructions and estimates are now turned into typed orders a matter of minutes. Previous delays ran up to 24 hours.

At Otis, four TELEVOICewriter recorders (one shown below) save 35 low-cost TELEVOICE phones in 11 departments. They replace old individual instruments which had become obsolete--at a savings in equipment cost alone of \$50,000. And Otis reports other big plus in swift, convenient service--"amazing" transcription accuracy.



Thousands of businesses—large and small—in all fields agree with Otis that TELEVOICE is the handsomest, faster, more direct line to action in written work. You owe it to yourself to learn how EDISON TELEVOICE can speed your flow of business and save you money! Mail the coupon today—or call our representative.







*"Round and round  
and round they go—  
and what they count,  
only radarmen  
know!"*

# Everyone Can Count on VEEDER-ROOT



Yes, this time as before, every arm of the service counts on Veeder-Root in some way or other. The counters shown, for instance, supply figures that radarmen readily translate into vital information.

And there are scores of other Veeder-Root Counters, standard and special, electrical and mechanical, that "talk the language" of more military and civilian jobs than you can shake a slide-rule at!

**VEEDER-ROOT INC.**  
HARTFORD 2, CONN. • GREENVILLE, S. C.  
Montreal, Canada      Dundee, Scotland  
*Offices and agents in principal cities*



**VEEDER-ROOT COUNTERS** *"Count Everything on Earth"*

# If You Make Electrical Appliances...



## ....WIRE WITH Belden AND CUT COSTS

**Cut Costs**—start with the right wire—a wire engineered for motors—for internal connections—for power supply cords.

**Cut Costs**—in lower installation costs—in less production line waste and fewer rejections upon inspection. Prevent failure in service—insure customer good will.

**Cut Costs**—specify Belden Wire. Our engineers can demonstrate these advantages of "wiring right." Investigate, today.

Plus Protection  
in Belden  
Heater Cords

Belden Manufacturing Co.  
4689-A W. Van Buren St.  
Chicago 44, Illinois

# Belden

WIREMAKER FOR INDUSTRY

## BUSINESS WEEK

EDITOR & PUBLISHER, Elliott V. Bell  
MANAGING EDITOR Edgar A. Grunwald  
EXECUTIVE EDITOR Kenneth Kramer

ASST. MANAGING EDITOR Robert B. Colborn  
ASSOC. MANAGING EDITOR John L. Cobbs

### DEPARTMENT EDITORS

*Business Outlook*, Clark R. Pace • *Finance*, William McKee Gillingham • *Foreign*, Howard Whidden • *Illustration*, James C. Nelson, Jr. • *Industrial Production*, Joseph Gilbert • *Labor*, Merlyn S. Piczele • *Law*, Joseph A. Gerardi • *Management*, Richard L. Waddell • *Marketing*, Carl Rieser • *Pictures*, Mary Flaherty • *Regional Reports*, Richard M. Machol • *The Trends*, Gabriel S. Hauge

### NEWS EDITORS

Peter French, Stanley H. Brown, T. B. Crane, Robert F. Deed, Frank J. Fogarty, Maxwell D. Gunther, Irene Pearson, Guy Shipley, Jr., Doris I. White • *Photography*, Dick Wolters

### EDITORIAL ASSISTANTS

Marilyn T. Benjamin, Cora Carter (Asst. Marketing Editor), J. P. Chamberlain (Asst. Finance Editor), Jean Drummond, William B. Franklin, Charles M. Garvey (Asst. Industrial Production Editor), John Hoffman, Harry Jensen, Keith Kunhardt, Jacquelyn Lang, Mary Maguire, Kate McSweeney, Paul R. Miller, Jr. (Asst. Foreign Editor), Beatrice Mullin, Arthur Richter, Dorothea Schmidt, Edward T. Townsend (Asst. Labor Editor), • *Statistician*, Gertrude Charloff • *Librarian*, Mildred L. Washburn

### ECONOMICS STAFF

Dexter M. Keezer, Douglas Greenwald, Robert P. Ulin, Richard Everett, Howard C. Gary, Earl Holmer, Beryl M. Hegarty, LaWanda Turner

### DOMESTIC NEWS SERVICE

*Boston Bureau*, John Harshorne • *Chicago Bureau*, James M. Sutherland, Mary B. Stephenson, Dorothy Miller • *Cleveland Bureau*, Robert E. Cochran • *Detroit Bureau*, Stanley H. Brams, James C. Jones, Jr., Glenna S. Sotter • *Los Angeles Bureau*, Thomas M. Self • *Pittsburgh Bureau*, Richard N. Larkin • *San Francisco Bureau*, Richard Lamb • *Washington Bureau*, George B. Bryant, Jr., Glen Bayless, Carter Field, Boyd France, Joseph Gambatese, Sam Justice, William H. Kearns, John L. Kent, Donald O. Loomis, Edward McLain, Jesse Mock, Gladys Montgomery, Arthur L. Moore, Seymour Nagan, Caroline Robertson, Vincent Smith, W. B. Wichard, Jr. • *Correspondents*: Akron, Albuquerque, Atlanta, Baltimore, Bangor, Birmingham, Buffalo, Charleston, Cincinnati, Columbus, Dallas, Denver, Des Moines, Houston, Indianapolis, Kansas City, Knoxville, Louisville, Madison, Memphis, Miami, Minneapolis, New Orleans, Norfolk, Oklahoma City, Omaha, Philadelphia, Portland, (Ore.), Providence, Richmond, Rochester, Salt Lake City, San Diego, Seattle, St. Louis, Syracuse, Wichita, Wilmington, Honolulu.

### FOREIGN NEWS SERVICE

*Editor*, Russell F. Anderson • *London*, Nathaniel E. Kitcherick • *Paris*, Ross Hazeltine • *Frankfurt*, Gerald Schroder • *Tokyo*, Alpheus W. Jessup • *Rio de Janeiro*, Joseph K. Van Denburg, Jr. • *Mexico City*, John Wilhelm • *Manila*, Herbert Leopold. *Correspondents*: Amsterdam, Bangkok, Bogota, Cairo, Caracas, Copenhagen, Geneva, Johannesburg, Lima, Madrid, Melbourne, Oslo, Ottawa, Rome, Santiago, Shanghai, Stockholm.

ADVERTISING & BUSINESS MANAGER  
Herman C. Sturm

BUSINESS WEEK • JANUARY 19 • NUMBER 1168

(with which are combined The Annalist and the Magazine of Business) • Published weekly by McGraw-Hill Publishing Company Inc., James H. McGraw (1860-1948), Founder • Publication Office, 99-129 North Broadway, Albany, N. Y. • Editorial, Executive and Advertising Offices, 330 West 42nd St., New York 36. • Curtis W. McGraw, President; Willard Greville, Executive Vice-President; Joseph A. Gerardi, Vice-President and Treasurer; John J. Cooke, Secretary; Paul Montgomery, Senior Vice-President, Publications Division; Ralph B. Smith, Editorial Director; Nelson Bond, Vice-President and Director of Advertising.

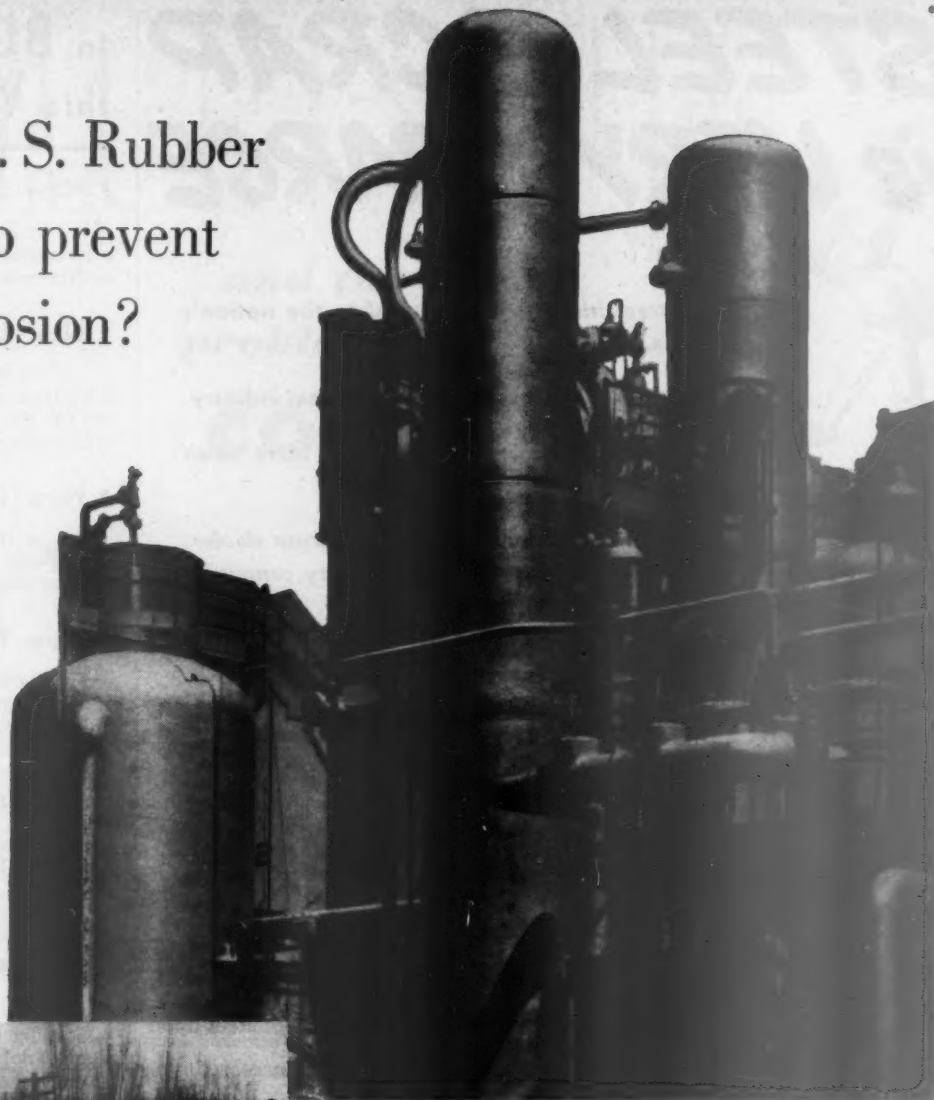
**Subscriptions:** Address correspondence regarding subscriptions to J. E. Blackburn, Jr., Vice-President and Director of Circulation, Business Week, 99-129 N. Broadway, Albany 1, N. Y., or 330 West 42nd St., New York 36. Allow ten days for change of address.

Subscriptions to Business Week are solicited only from management-men in business and industry. Position and company connections must be indicated on subscription orders.

Single copies 25c. Subscription rates—United States and possessions \$5.00 a year; \$12.00 for three years. Canada \$7.00 a year; \$14.00 for three years. Pan American countries \$15 a year; \$30.00 for three years • All other countries \$25 a year; \$50.00 for three years • Entered as second class matter Dec. 1, 1938, at the Post Office at Albany, N. Y., under Act of Mar. 3, 1879 • Printed in U.S.A. Copyright 1952 by McGraw-Hill Publishing Co., Inc. — All Rights Reserved.

BUSINESS WEEK • Jan. 19, 1952

# What's U. S. Rubber doing to prevent corrosion?



**ROYALGUARD PROTECTIVE COATING** has excellent resistance to weather. It will not crack or chip. It is ideally suited to protect chemical processing equipment, tanks, tank cars, pipes, fittings, structural steel parts and machinery.

U. S. Royalguard, the new, remarkable protective coating, is a wonderful defense against corrosive attack. Sprayed on surfaces of steel, aluminum, concrete, hardwoods, masonite and transite, it provides effective resistance against a wide range of chemicals. Royalguard reduces maintenance and replacement costs. It has high film flexibility and adhesion qualities, becomes tack free rapidly at room temperatures, has excellent reverse impact resistance, requires no primer. For more information about Royalguard write to address below.

PRODUCT OF



**UNITED STATES RUBBER COMPANY**

MECHANICAL GOODS DIVISION • ROCKEFELLER CENTER, NEW YORK 20, N.Y.



# STEEL SCRAP is VERY SCARCE



America's steel industry is essential to the nation's defense.

Large quantities of scrap are used by the steel industry.

**YOU**—in your plant or on your property have scrap that's urgently needed.

Unless you turn your scrap over to your scrap dealer, the steel so vital to American industry cannot be made.

## GET YOUR SCRAP MOVING...TODAY



LOOK FOR THE  
YELLOW TRIANGLE  
ON THE REEL

Wire Rope—sinewy muscle of industry—is one more of the many products of steel upon which America depends for the increased production necessary to meet both civilian and defense demands.

Here, too, your scrap contribution is of vital importance... enabling us to serve you better... helping to provide you with a continued, uninterrupted supply.

THE CALIFORNIA WIRE CLOTH CORP.—Los Angeles • Oakland • Portland • San Francisco • Seattle • Spokane  
THE COLORADO FUEL & IRON CORP.—Arlene (Tex.) • Denver • Houston • Odessa (Tex.) • Phoenix • Salt Lake City • Tulsa  
WICKWIRE SPENCER STEEL DIV.—Boston • Buffalo • Chattanooga • Chicago • Detroit • Emhanton (Pa.)  
Philadelphia • New York

### WICKWIRE ROPE



PRODUCT OF WICKWIRE SPENCER STEEL DIVISION  
THE COLORADO FUEL & IRON CORPORATION

## In BUSINESS this WEEK...

### • New Dream Car...

... by Ford is a laboratory as well as a forerunner of what you'll be driving in Nineteen Fifty X. P. 25

### • New Life...

... for heart cases is coming from a Cleveland clinic. It provides answers to one of the toughest of industry's human problems. P. 52

### • New Look...

... at the newest candidate—Eisenhower—may give you some new ideas on how the General stands. P. 98

### • New Figures...

... showing just how rich the U.S. is, reveal that the nation has been adding to its wealth at a rapid rate since World War II. P. 114

### • New Customer...

... board has brought new thinking to a big Brooklyn cash-and-carry specialty store—and management hopes it'll bring new business. P. 141

### • New Plants...

... are coming in under the \$10-billion defense expansion program. But they're not coming so fast as scheduled. P. 156

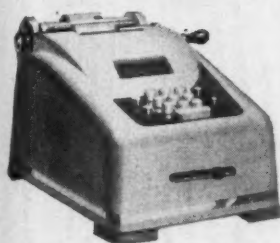
## THE DEPARTMENTS

Business Abroad .....	165
Business Outlook .....	9
Commodities .....	66
Defense Business .....	156
Economics .....	114
Figures of the Week .....	15
Finance .....	146
Health .....	52
Ideas .....	98
International Outlook .....	163
Labor .....	32
Law .....	62
Marketing .....	136
The Markets .....	153
New Products .....	92
Production .....	74
Readers Report .....	60
Research .....	107
Taxes .....	123
Transportation .....	130
The Trend .....	172
Washington Outlook .....	17



# MAGNESIUM

## *and the problem of COST*



## *in your product*

**T**HE cost of any metal extends much further than just the cost of raw ingots. This is particularly true of magnesium, a metal that offers many economies from ingot to your finished product.

At the ingot stage, magnesium has an outstanding record of price stability. By its very nature . . . electrochemically extracted from unlimited sea waters at our own shores . . . that stability is inherent.

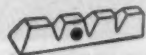
Then there is the cost of metal fabrication, a cost largely dependent upon fabricating knowledge and facilities. Perhaps no other metal has advanced so rapidly in fabricating techniques in the past ten years. Today, magnesium is produced in all common forms such as extrusions, sheet, plate or castings at

prices generally competitive with other metals.

Within your own plant, magnesium offers many economies. It is one of the most machinable of all metals. It has excellent hot drawing qualities, permitting deeper draws than any other metal. And throughout your manufacturing and distributing processes, magnesium's light weight cuts the costs of transportation and handling.

But above all, magnesium cuts the competitive penalty of weight at the point of sale. Wherever a product is made to be moved, either by human or mechanical means, magnesium offers a real sales advantage, for it is the world's lightest structural metal . . . one-third lighter than the next lightest metal.

### *For your "Tomorrow's" Product . . .*



Today, magnesium is a tremendously important part of our defense effort, and like many other metals, is required in great quantities by the government. But in planning "Tomorrow's" production, remember this fact: the seas, at our own shores can provide 100 million tons of magnesium per year for 1,000,000 years without significantly reducing the supply!

*Magnesium Dept.*

**THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN**

New York • Boston • Philadelphia • Atlanta • Cleveland • Detroit • Chicago • St. Louis  
Houston • San Francisco • Los Angeles • Seattle • Dow Chemical of Canada, Limited, Toronto, Canada





Seventy-nine Sturtevant fans circulate half a million cubic feet of air a minute, the year 'round, quietly, smoothly.

## FRESH CLEAN AIR FOR A SKYSCRAPER

It takes plenty of air to make an ultra-modern skyscraper the efficient workplace it was designed to be. For example, look at Pittsburgh's new 525 William Penn Place Corporation Building which houses the U. S. Steel Corporation and the Mellon National Bank & Trust Co. Air is the medium which keeps this building warm in winter, cool in summer—comfortable and healthy all the year 'round.

Dependable Sturtevant fans and dehumidifiers were specified for use with the heating, ventilating and air

conditioning system of this massive structure. In a portion of the building, electronic air cleaning by the Westinghouse PRECIPITRON® removes dirt, soot, pollen—even smoke—from the air, will pay for itself many times over in reduced cleaning costs.

The complete line of Westinghouse equipment helps you *put air to work* . . . with air conditioning, air moving or air cleaning. Contact your local Sturtevant office, or write to Westinghouse Electric Corp., Sturtevant Division, Hyde Park, Boston 36, Mass.



Air isn't just cleaned, it's electronically-purified. 8 Westinghouse PRECIPITRON units slash cleaning costs.



19 Sturtevant Dehumidifiers wring 660 gallons of water per hour from the air on muggy days, humidity on dry days.

YOU CAN BE SURE... IF IT'S **Westinghouse**







# BUSINESS OUTLOOK

**BUSINESS WEEK**  
**JANUARY 19, 1952**

**A**  
**BUSINESS**  
**WEEK**  
**SERVICE**

Home building this year undoubtedly will run well beyond the government's announced ceiling of about 650,000 units.

Limits on the use of metal, so far, are the only real curb. These will be largely meaningless due to stretching of metal supplies or substitutions.

Quotas on builders could hold housing down—but seem very unlikely.

Builders probably will have more trouble finding furnaces and complete kitchen units this year than the metal products that become an integral part of the new home.

Restrictions on manufacture of refrigerators and automatic washers, for example, should make it hard, in theory, to deliver finished homes.

However, that overlooks today's large inventories of such items. Builders, left to their own resources, will have little trouble.

Credit may be more of a curb on housing than metals.

Some lenders deny this. They reason that fewer for-sale units will be competing for a growing supply of mortgage money.

However, this may ignore the competition of other types of investments. Good preferred stocks now yield more than guaranteed mortgages.

In fact, many investors long have been cold to the return on Veterans Administration and Federal Housing Administration loans.

About 620,000 of the 1,090,000 homes started last year were financed under mortgage restrictions laid down in the Federal Reserve's modified Regulation X. (Of the others, 400,000 were financed prior to Regulation X and some 70,000 were put up with public funds.)

It should be easy to get mortgage money for more than 620,000 this year. To that should be added the defense housing program's total.

Housing in 1951 overshot the government's 850,000-unit goal by 28%. If starts in 1952 should exceed the federal "estimate" by a similar margin, more than 825,000 housing units will get under way this year.

President Truman's request for tightened credit controls, at most, may offset a drive to weaken them further or wipe them out.

These controls aren't regulating much of anything now. Mortgage money flows more in response to the interest rate than to down payments and monthly instalments; autos and major appliances are still slow due to slack consumer demand more than to time-sales terms.

But the need for flexibility remains. The Federal Reserve is unduly restricted by the reduced powers Congress voted last summer; obviously, any further tying of the Fed's hands could have serious results.

Instalment buying wasn't spurred much by the action of Congress easing credit terms. In fact, the net increase in such sales credit in the last half of 1951 was about \$250-million; in the same 1950 months, the gain in instalment-financed sales was a round billion dollars.

Curbs on instalment credit last year undoubtedly changed some of the patterns of consumer borrowing.

It was generally expected that people would switch from time-sale buy-

# BUSINESS OUTLOOK (Continued)

**BUSINESS WEEK**  
**JANUARY 19, 1952**

ing to charge-account buying. This probably took place because a good deal more charge-account credit was advanced in 1951 than in 1950 (despite the small retail sales rise).

Nevertheless, it's doubtful that the final figure on all types of consumer credit at the end of 1951 was much over the new record of \$20-billion chalked up a year earlier.

Thus 1951 was the first postwar year that failed to score a thumping gain in consumer credit. (The 1950 rise was \$3.2-billion.)

Growth of consumer credit undoubtedly was due to slacken sharply in 1951. Most of the pent-up demand for goods had been satisfied; the market had pretty well shrunk to replacements and growth.

Moderate net gains in credit will nourish such a market. By contrast, the 1945-50 consumer boom had devoured \$14.4-billion of loans.

People who aren't directly involved may very well ignore retail sales comparisons—1952 against 1951—until the end of February.

Drops of 15% to 25% have been common for many cities in the early weeks this year. And such figures will continue. The trouble, though, is that the figures a year ago were vastly swollen by scare buying.

Sales so far this year have been fairly well ahead of 1950. And there's a lot more "normalcy" in comparing with 1950 than with 1951.

Modest improvement is appearing in some textile and apparel lines. So far, though, it is too slight and too spotty to signal recovery.

Synthetic fibers, of course, have suffered less all along than cottons and woolsens. Burlington Mills—mainly a weaver and knitter of man-made fibers—reports its business nearing normal finally.

The same day, though, Fall River's Sagamore Mfg. Co. announced an indefinite closedown (affecting about 1,000 employees).

December had no silver lining for many merchants. A low-priced hat chain's sales ran 18% under the same month a year earlier even though the full year averaged only 8.8% lower. A shoe chain reports a drop of more than 7% for December although a gain of 2% was shown for the 12 months.

Use of cotton in the U. S. since July (end of the old cotton year) shows a brighter picture than consumer sales might indicate.

Average use per working day for the five months is just under 37,000 bales. That's below the overstimulated rate of the same 1950 months, but as good or better than in 1947, 1948, or 1949.

Military orders, of course, are the stabilizing factor this year.

Lower domestic use of cotton leaves just that much more for export—and shipments turned up sharply late last year. Exports in November, in fact, topped home consumption—a phenomenon of the first water.

Consumers may expect higher meat prices from now on—unless they back away from the price tags.

In another couple of weeks, slaughter of both beef animals and hogs will be heading into its long seasonal slide.

128  
AL







## Could Sam Kier's Refinery Fuel a B-36?

Back in the early 1850's, Sam Kier's five-barrel refinery in Pittsburgh, Pa., distilled crude oil into a fine lighting fuel. But it wouldn't push a piston in today's B-36. For it takes "super high octane" to get a long-range bomber there and back.

Only modern refinery equipment can produce such power-packed fuel in quantity. Unlike Sam Kier's pioneer equipment, today's low-cost, low-maintenance units regularly produce thousands of barrels of high octane fuel daily. They provide the highest percentage of yields-to-charge ever known; continuous operation; adaptability to a wide range of feeds.

In your field too, the *best* equipment is the result of cooperative development

between the engineering staffs of progressive Equipment Builders, process engineers and materials suppliers. In developing such equipment, these experienced builders regularly turn to Lukens for its knowledge of materials, as well as its wide range of specialty steel plate, heads and steel plate shapes providing essential design freedom, strength and rigidity.

Even with new equipment hard to get, these builders can often recondition what you have for better, more profitable production. For their names, write us today, explaining your problem. Manager, Marketing Service, 483 Lukens Building, Coatesville, Pa.



# LUKENS STEEL COMPANY

WORLD'S LEADING PRODUCER OF SPECIALTY STEEL PLATE • PLATE SHAPES • HEADS • CLAD STEELS

THE UPJOHN COMPANY

# "3 National Machines save us \$27,000 a year"...

THE **Upjohn** COMPANY

"Three National Payroll-Accounting Machines save us \$27,000 a year, which returns their cost every 8 months. We use these machines for payroll writing, analysis and distribution and other accounting jobs.

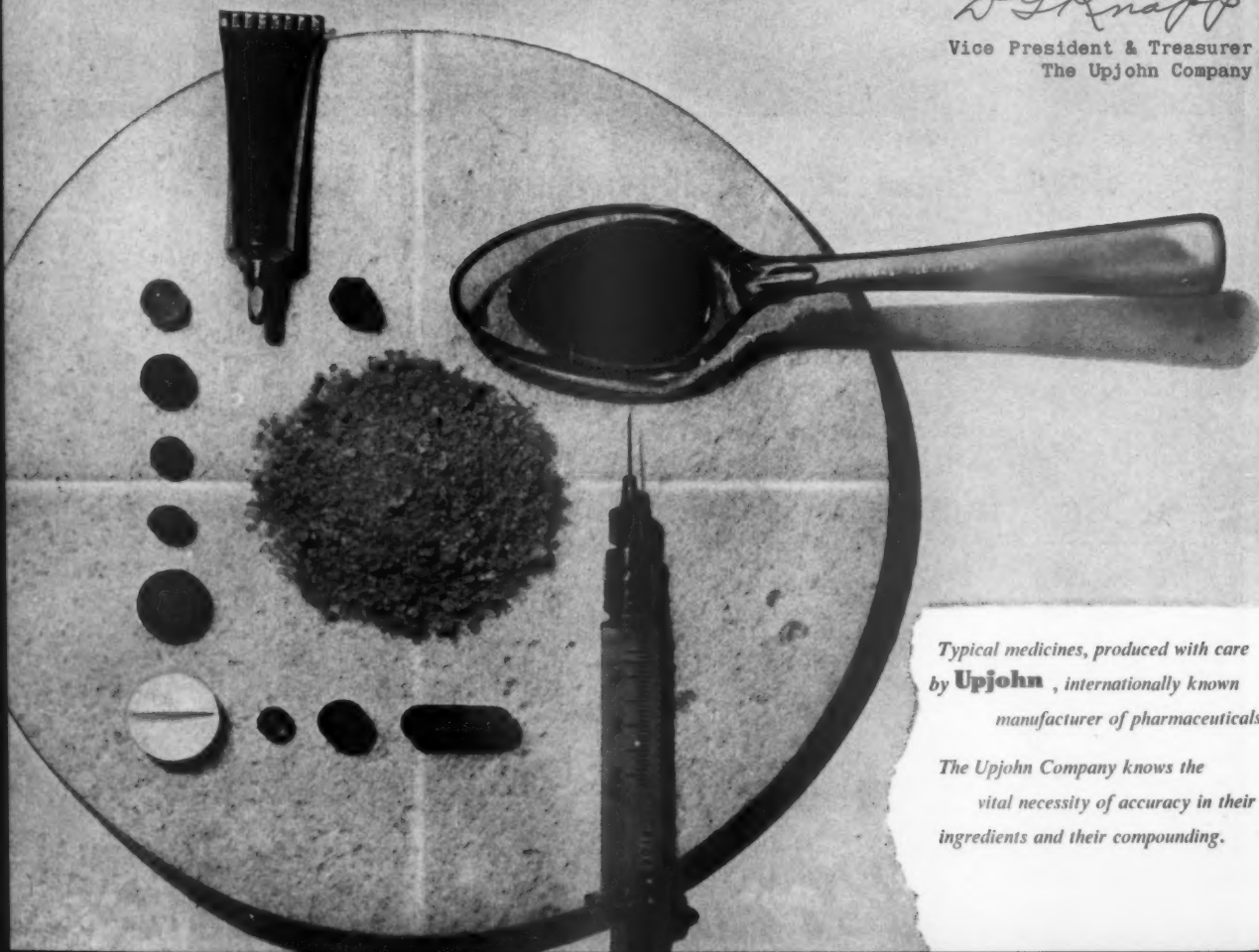
"Recently we installed two of your Class 31 Accounting Machines for General Accounting work and have recently ordered another

for still another job. We expect to effect substantial savings with them as well.

"We also use National Cash Registers in our cafeterias and canteens, and National Adding Machines in our offices. These machines, too, have paid for themselves through savings and other benefits."

*O. S. Knapp*

Vice President & Treasurer  
The Upjohn Company



Typical medicines, produced with care  
by **Upjohn**, internationally known  
manufacturer of pharmaceuticals.

The Upjohn Company knows the  
vital necessity of accuracy in their  
ingredients and their compounding.



**NATIONAL PAYROLL-ACCOUNTING MACHINE.**

(Model used by Upjohn). Has 25 payroll totals, and 42 totals for analysis and distribution.



**NATIONAL SALES REGISTER.**

Pays for itself in Upjohn's cafeterias by speeding service and enforcing correct recordings of transactions.



**NATIONAL CLASS 31 ACCOUNTING MACHINE.**

(Recently installed by Upjohn). Latest development for multiple-duty accounting. Has electrified typewriter for typing descriptions.



**NATIONAL ADDING MACHINE.**

(Model shown used by Upjohn). Has time-and-effort-saving features never before combined on one adding machine.

National machines promote accuracy in accounting by doing up to  $\frac{2}{3}$  of the work automatically—and what machines do automatically the operators cannot do wrong.

National machines soon pay for themselves out of the money they save, then go on

year after year returning their cost as handsome profit.

There is a model for every size and type of business. Let the local National representative, a trained systems analyst, show what *you* can save with the National System suited to your particular needs.

**THE NATIONAL CASH REGISTER COMPANY, DAYTON 9, OHIO**

*National*



## ... contributes to improved production and morale in Nunn-Bush Shoe Plant

**B**y actual experience with Pittsburgh COLOR DYNAMICS, executives in many plants are finding that color properly "engineered" on machines, walls, floors and ceilings of their plants produces *more work per man-hour and more man-hours per man!*

● This new painting system is based upon the simple fact that the physical, mental and nervous systems of human beings are affected and influenced by the energy in color.

The Milwaukee, Wisconsin, plant of the Nunn-Bush Shoe Company, one of America's foremost shoe manufacturers, is an example of the benefits that result from the use of COLOR DYNAMICS.

● Three years ago this plant was repainted according to COLOR DYNAMICS—walls, ceilings, floors and machinery. Focal colors were used on operating parts of machinery and eye-rest colors on stationary parts to en-

able workers to see their tasks better. Walls and ceilings were finished with *morale-building* colors to provide additional eye-rest areas. *Safety* colors were used to reduce accident hazards.

● The benefits to workers and management since repainting with COLOR DYNAMICS are told by Elmer E. Rexin, Nunn-Bush's Maintenance Superintendent: "Formerly machines were dark gray and the work benches were merely shellacked. Since repainting, we have noticed a decided change in the efficiency of our operations and in the morale of our workers.

"The new color treatment reduced eye fatigue, helped to improve the morale and created a more orderly appearance. Our employees became more conscious of cleanliness and each machine operator made great strides to keep his machine neat and tidy. The new color scheme also received many favorable comments from the many visitors who came to our factory."

### You Can Obtain a COLOR DYNAMICS Engineering Study of Your Plant—FREE!

Your plant may need COLOR DYNAMICS. Why not try this new painting system on a machine or two—or in one department? We'll be glad to make a scientific color engineering study for you FREE and without obligation.

There's a trained color expert at each of our offices located in all principal cities. Call your nearest Pittsburgh Plate Glass Co. branch and arrange to have our COLOR DYNAMICS representative see you at your convenience. Or send the coupon below.

### Mail this coupon for FREE BOOKLET!

Pittsburgh Plate Glass Co., Paint Div.,  
Department BW-12, Pittsburgh 22, Pa.

☐ Please send me a FREE copy of your new revised and enlarged booklet, "Color Dynamics in Industry."

☐ Please have your representative call for a Color Dynamics Survey of our properties without obligation on our part.



Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ County \_\_\_\_\_ State \_\_\_\_\_



# PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS



dy

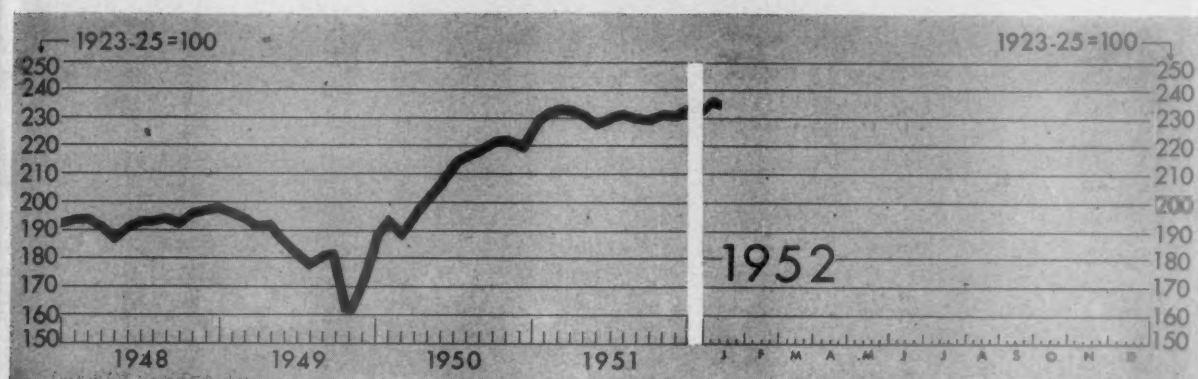
DY-  
aint-  
or in  
nake  
y for

each  
cipal  
urgh  
ge to  
epre-  
ence.

KLETI



# FIGURES OF THE WEEK



**Business Week Index (above)** . . . . . \*236.6    †237.4    236.1    233.6    173.1

## PRODUCTION

	\$ Latest Week	Preceding Week	Month Ago	Year Ago	1946 Average
Steel ingot production (thousands of tons).....	2,051	2,041	2,097	1,991	1,281
Production of automobiles and trucks.....	94,799	†53,601	115,627	139,679	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$40,860	\$35,612	\$36,305	\$48,764	\$17,083
Electric power output (millions kilowatt-hours).....	7,666	7,149	7,667	6,981	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	6,178	6,187	6,225	5,762	4,751
Bituminous coal production (daily average, thousands of tons).....	1,825	†1,571	1,874	2,005	1,745

## TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars).....	76	76	77	77	82
Carloadings: all other (daily av., thousands of cars).....	54	52	52	50	53
Department store sales (change from same week of preceding year).....	-21%	†+12%	-1%	+39%	+30%
Business failures (Dun and Bradstreet, number).....	164	†126	143	193	217

## PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	458.2	461.2	457.9	522.1	311.9
Industrial raw materials, daily index (U.S. BLS, Aug., 1939 = 100).....	314.5	†317.3	317.6	375.4	198.8
Domestic farm products, daily index (U.S. BLS, Aug., 1939 = 100).....	355.7	358.4	356.0	397.8	274.7
Finished steel composite (Iron Age, lb.).....	4.131¢	4.131¢	4.131¢	4.131¢	2.686¢
Scrap steel composite (Iron Age, ton).....	\$42.00	\$42.00	\$42.00	\$46.08	\$20.27
Copper (electrolytic, Connecticut Valley; lb.).....	24.500¢	24.500¢	24.500¢	24.500¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.52	\$2.52	\$2.55	\$2.40	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	42.13¢	42.15¢	41.60¢	44.27¢	30.56¢
Wool tops (Boston, lb.).....	\$2.25	\$2.25	\$2.30	\$4.10	\$1.51

## FINANCE

90 stocks, price index (Standard & Poor's).....	190.9	189.5	186.1	169.0	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.60%	3.62%	3.62%	3.18%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	2½%	2½%	2½%	1½%	1½%

## BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	53,706	53,370	54,243	51,306	††45,210
Total loans and investments, reporting member banks.....	73,729	74,217	73,771	70,824	††71,147
Commercial and agricultural loans, reporting member banks.....	21,267	21,419	21,219	17,924	††9,221
U. S. gov't and guaranteed obligations held, reporting member banks.....	32,074	32,224	32,115	33,046	††49,200
Total federal reserve credit outstanding.....	24,554	24,825	24,980	21,235	23,883

## MONTHLY FIGURES OF THE WEEK

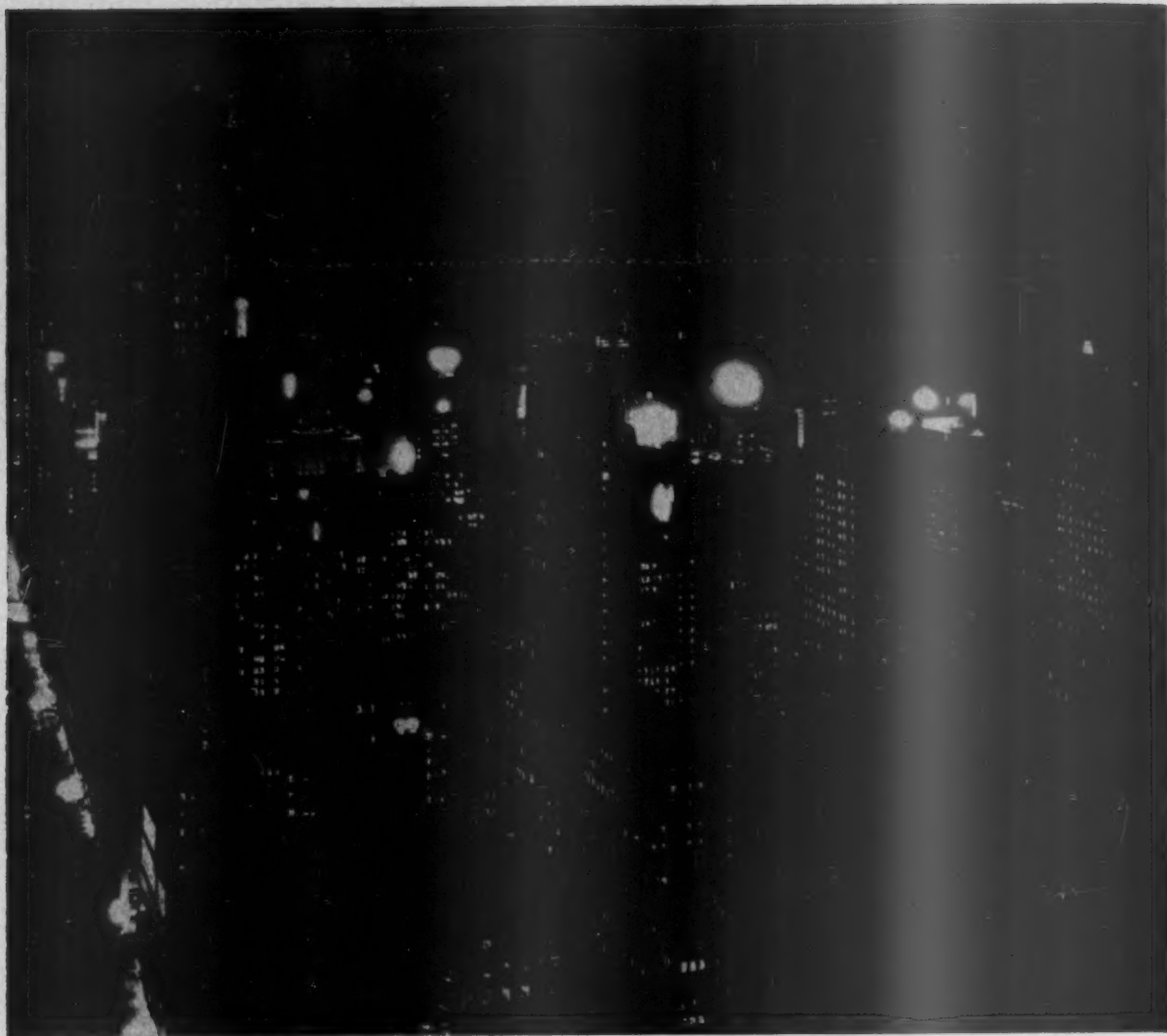
		Latest Month	Preceding Month	Year Ago	1946 Average
Exports (in millions).....	November.....	\$1,386	\$1,155	\$977	\$811
Imports (in millions).....	November.....	\$818	\$833	\$855	\$412
Housing starts (in thousands).....	December.....	62.0	76.0	93.6	55.9
Bank debits (in millions).....	December.....	\$144,786	\$132,159	\$139,542	\$87,502

\*Preliminary, week ended Jan. 12.

††Estimate (BW—Jul.12'47,p16).

§ Date for "Latest Week" on each series on request

† Revised.



## NIGHT LIFE IN THE BIG TOWN

To millions of people nighttime is worktime . . . in office, factory, myriad places. For this is the Electrical Age, which has filled the world with light and power, created new industries and widespread employment. In countless ways it has made work easier, life safer, more comfortable and enjoyable.

Makers of this magic power are the nation's electric utilities, who have invested billions of dollars in generating plants and equipment to assure you dependable, low-cost service.

Helping to provide this assurance are thousands of Exide Batteries for switchgear operation, emergency lighting and other battery jobs.

Where dependability is vital, you'll

**Exide**  
BATTERIES

"Exide" Reg. Trade-mark U.S. Pat. Off.

find Exide Batteries. There is an Exide for every storage battery need. They provide motive power for battery-electric industrial trucks and mine haulage units. They are used in airplanes and ocean vessels . . . and by railroads for car lighting, air-conditioning, diesel locomotive starting, signal systems. Vast numbers of Exide Batteries are used by telephone and telegraph companies, radio and television stations. And on millions of cars, trucks, tractors and buses they daily prove that "When it's an Exide, you START."

1888 . . . DEPENDABLE BATTERIES FOR 64 YEARS . . . 1952

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 2 • Exide Batteries of Canada, Limited, Toronto



# WASHINGTON OUTLOOK

WASHINGTON  
BUREAU  
JAN. 19, 1952

A  
BUSINESS  
WEEK  
SERVICE

**Watch for a trick formula to raise steel prices.** The details aren't set. But the gist of what Truman's economic stabilizers have in mind is this: They want to interpret the law as requiring the Office of Price Stabilization to let steel prices rise, regardless of how the wage issue is settled. Thus the blame for rising prices will be on the law, which Congress wrote, and not on the higher wages, which Truman backs. Anyway, that's what you'll be asked to believe.

**Election-year softness in defense** now is beginning to show up. The mobilizers deny they're influenced, of course. But the record shows:

**For autos,** the second-quarter copper allocation was jumped 25% after industry and labor protested the National Production Authority's tentative cutback. Word for the NPA to back down came from the White House.

**"Nonessential" hard goods**—jewelry, window blinds, toys, etc.—got an increase in metals when small-business heat turned on.

**New storm of cutback protests is brewing.** It will break over NPA and Congress just as soon as second-quarter allocations are fixed, line by line and company by company. Many metal users will face the prospect of operating below the break-even point. And now that NPA has started yielding to pressure, it will be hard put to hold fast in the future.

**Efforts to aid cut-back companies** and reduce unemployment are being stepped up. At a West Coast clinic attended by 104 firms, NPA found seven could handle prime contracts, 41 could take subcontracts, and 14 could make "shelf items"—bolts, nuts, etc., for which controlled materials are available (page 24). Mobilizer Wilson has instructed the defense agencies to place contracts without competitive bidding in defense unemployment areas. This is not an efficient way to get arms. It's another bow to pressure.

**Extension of price, wage, and credit controls** will bring on a bitter fight. And Congress, facing election, will delay to the limit—June 30.

**The anticontrol forces are lining up.** Organized business and farm groups are just about unanimous in opposing price ceilings beyond midyear. Unions want price control tightened, but they want an end to wage control. Real estate men and retailers want credit curbs lifted as a business boost. Each group is powerful and will light its fire under Congress.

**Allocation of controlled materials** isn't in question. There's opposition, but it's not too formidable.

**The outcome of the fight can be anticipated.** Controls will remain for another year at least. Congress is afraid to chop them off this year. Truman could make political capital out of that if inflation became painful. But Congress may decide to leave the future of controls up to the President—a finding by him that they are necessary. In that way, election-time complaints would be focused on the White House, not on Congress.

**Pay-as-you-go defense financing is out.** This means that the peak years of arms spending will create deficits.

**A \$13-to-\$15-billion tax rise has no chance.** And that's what would

# WASHINGTON OUTLOOK (Continued)

WASHINGTON  
BUREAU  
JAN. 19, 1952

be needed to balance the new budget that Truman will send to Congress next week. He won't ask any such increase.

A \$4-billion plus tax boost is all that Truman wants at this time. But Congress will balk even on that. There's widespread doubt that spending will reach the heights Truman forecasts, short of a new war scare.

This year's economic report (page 21) doesn't mean much. It's little more than an argument for Truman's whole program, Fair Deal and all. Congress has become used to this. So the arguments for such things as bigger old-age pensions, higher unemployment benefits, aid to education, and the Brannan Plan no longer cut any ice. In fact, serious talk in Congress on the abolition of the Council of Economic Advisers, staffed with high-paid experts, seems certain at this session.

Universal Military Training is a hot potato politically. Congress approved it last year, in principle. Now comes the tough vote on making it work.

Tradition is at stake. The U. S. has never been a military nation. Conscription always has been a wartime measure. So there's much hesitation to make it a part of national policy. Congress wants to delay.

Truman's cleanup of scandal is disappointing to his followers. An independent commission to do the job is out. Truman has handed over the broom to Attorney General McGrath, and some of his Justice Dept. aides are involved in the favor-doing.

Congress will keep digging. Republicans and anti-Truman Democrats will see to that. But it will take time—years—for Congress to get to the bottom of things unless Truman helps.

News stories on Truman's intentions are guesses. You can make a good case that he will or won't run.

He has said that he has made up his mind—knows what he will do. He told that to newsmen months ago.

Now he says he hasn't made up his mind. That's what political men say he tells them when they talk with him at the White House.

The fact is that Truman is pulled and hauled. His family has "had enough." Dissension within the party is worse than in 1948. Scandals are hurting. The war in Korea is unpopular. The pinches of defense are making enemies. Truman is aware of all this. He's also aware that he can make the race if he wishes.

Pressure on Truman to declare his intentions is mounting. The longer he waits, the harder for anyone else to rise; harder, too, for Truman to quit.

Vice-president Barkley looms in the background. If Truman runs, he'll go along as V-P again. But if Truman steps down, Barkley will go for the No. 1 prize—the Presidency. It will be hard for any Democrat to beat him to the nomination. True, he's going on 75. But he's vigorous. And he's a campaigner who can make it rough for any Republican, be it Taft or Eisenhower.

In Industrial Plant



and Village Store



**Simplest of all ways to Figure**

**is on the**

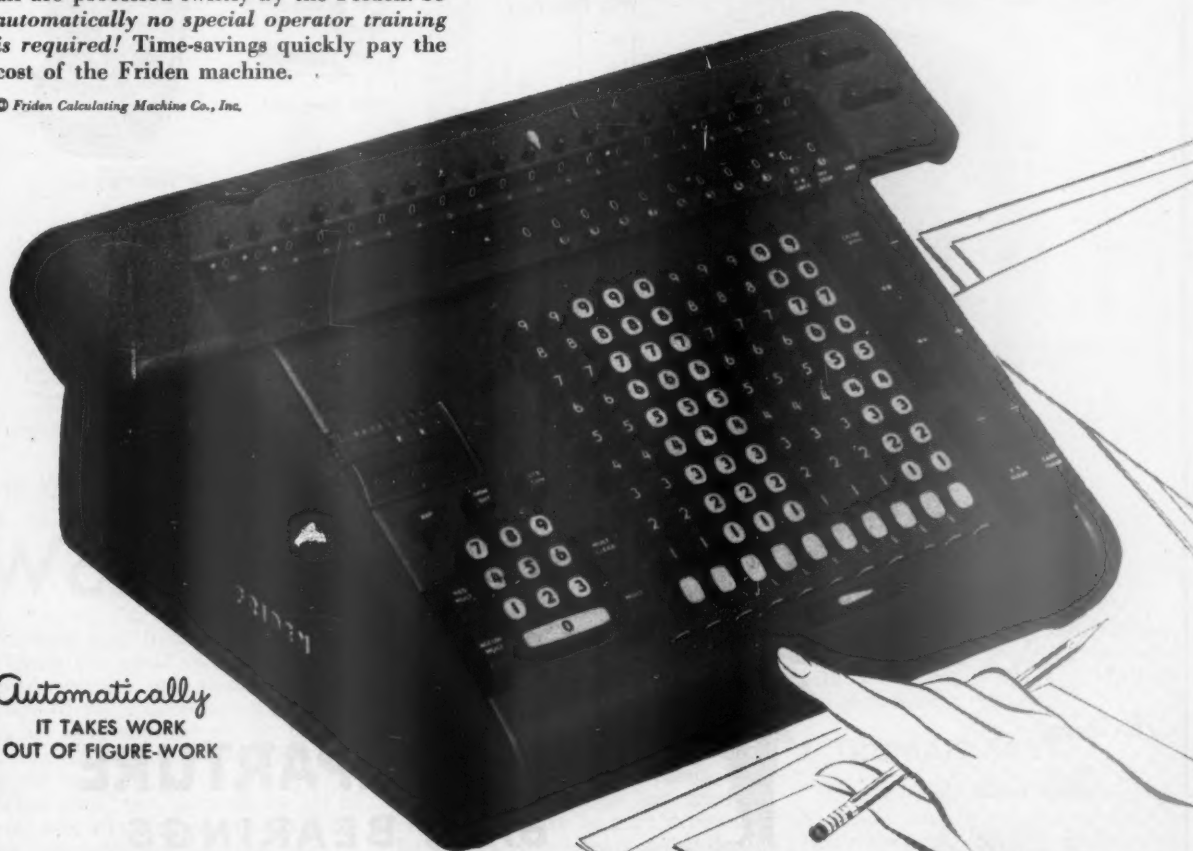
# Friden

**The Thinking Machine**  
**of American Business**

**F**RIDEN is the fully-automatic Calculator that does more kinds of figure-work with *fewer operator decisions* than any other calculating machine ever developed. Thus every kind of business—large or small, and no matter how specialized—becomes instantly more efficient when Friden takes over the figuring.

Payroll, inventory and invoicing calculations... percentage and interest... figure problems of engineering and production—all are processed swiftly by the Friden. So *automatically no special operator training is required!* Time-savings quickly pay the cost of the Friden machine.

© Friden Calculating Machine Co., Inc.



*Automatically*  
IT TAKES WORK  
OUT OF FIGURE-WORK

Figure on a **Friden**

Call in the Friden Man near you and learn Friden applications to your business. Friden sales, instruction and service available throughout the U.S. and the world.  
FRIDEN CALCULATING MACHINE CO., Inc., San Leandro, California

*Mr. Basic Bearing  
has quite a  
Wardrobe*



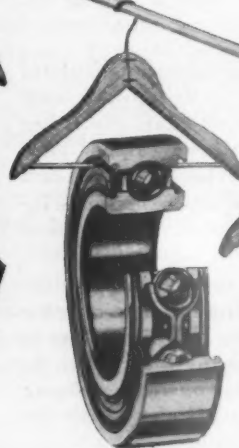
With One Shield



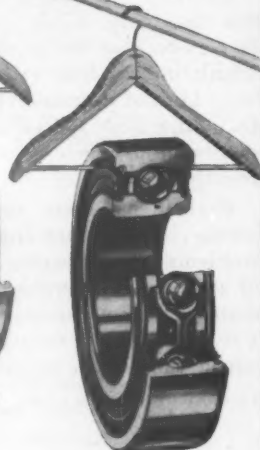
With Two Shields



With Snap Ring



With One Seal



With Two Seals



Basic  
Single Row  
Ball Bearing

The right "dress"  
for every job —  
available  
as accessories to  
New Departure's  
basic ball bearing.  
Let us tell you more

*Nothing  
Rolls Like  
a Ball*



**NEW DEPARTURE  
BALL BEARINGS**

NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONNECTICUT



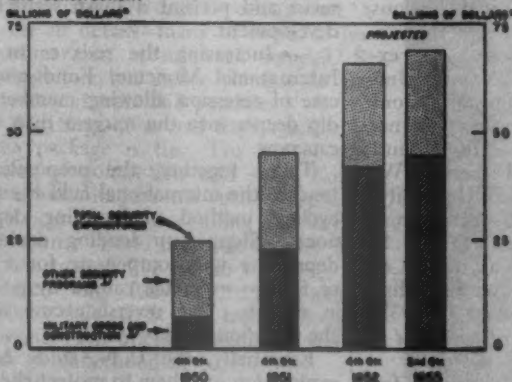
## WASHINGTON SEES —

- 1 The military program rising well into 1953
- 2 Metal shortages squeezing — even capital goods

### THE SECURITY PROGRAM

EXPENDITURES FOR GOODS AND SERVICES IN 1951 PRICES

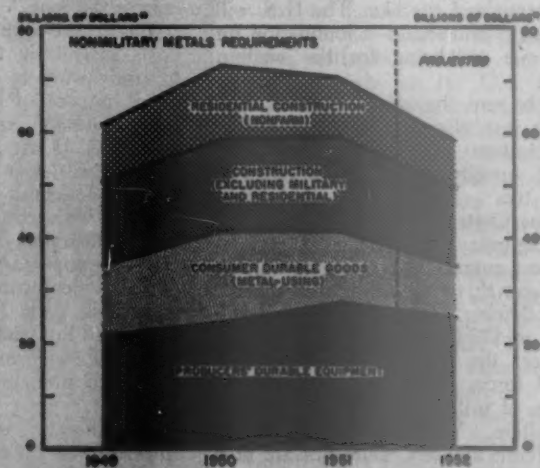
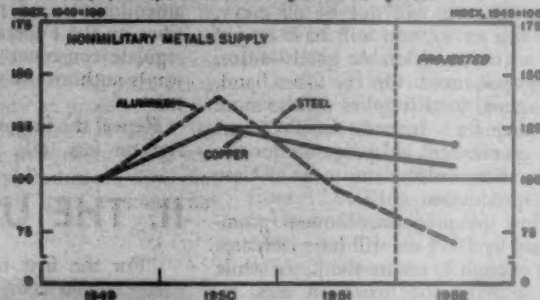
During 1952, the annual rate of security expenditures is expected to increase to a level about 20 billion dollars above the fourth quarter of 1951. Most of the increase will be for military goods and construction.



<sup>a</sup> Seasonally adjusted annual rate.  
<sup>b</sup> Includes military personnel costs and other salary expenditures of the Department of Defense, other federal agencies, state, local, and foreign governments (military only).  
<sup>c</sup> Used and new goods and construction for U.S. and foreign forces.  
SOURCE: DEPARTMENT OF DEFENSE, BUREAU OF THE BUDGET, AND BUREAU OF ECONOMIC ANALYSIS.

### METALS SUPPLY AND REQUIREMENTS FOR CIVILIAN USE

In 1952, there will be moderately less steel and substantially less aluminum and copper available for civilian use. This will impose curtailments in nonmilitary construction, producers' durable equipment, and metal-using consumer goods.



<sup>a</sup> Seasonally adjusted annual rate.  
SOURCE: DEFENSE PRODUCTION ADMINISTRATION AND BUREAU OF ECONOMIC ANALYSIS.

## THE OFFICIAL FUTURE:

# World Prosperity by Fiat

Looking at it from inside the U.S. or taking the world view, the governmental eye sees just about the same picture of the economic future. You may not agree with the picture, but it's the one the official policymakers are steering by.

This week two ultra-official documents take a look ahead. One is President Truman's annual economic report to Congress; the other is a study commissioned by the United Nations Economic and Social Council. From both emerge this sort of view of the future:

Prosperity as far as you can see ahead.

Behind the prosperity-government action. In the short term, Truman sees boom conditions resulting from U.S. armament. And, looking farther ahead, the U.N. study assumes that, even after mobilization has spent its force, there can be no great depression; the world's governments are so deeply committed to full employment that they would and could prevent any such thing from happening.

Secondary troubles going along with the prosperity. Truman talks of the

shortages accompanying a munitions boom; the U.N. group is concerned with ways to smooth out relatively minor economic recessions.

### I. TRUMAN SAYS:

Like his state of the union message, Truman's annual appraisal of the nation's economic health is merely a re-statement of U.S. defense goals and the Fair Deal program.

The theme: Despite today's local conversion unemployment and the over-long lull in consumer buying, the

buildup of defense and the expansion of industrial plant will keep the nation healthy for a long time to come. Truman sees the standard of living climbing at a rate that will double it within a generation.

• **More Jobs**—In the short run, Truman's Council of Economic Advisers tells him that we can and should lift the number of employed in 1952 by 1½-million. Total output should rise by 5%—\$15-billion to \$20-billion above current levels.

This progress will not be all gravy. For a year or so, you will have to get along with fewer durable goods—autos, homes, appliances. On the other hand, clothing and food supplies will be more than adequate. Indeed, the President wants government aid programs for the farmers so agriculture can meet all-time record production goals.

Follow my program, Truman promises, and by 1954 we will have defenses strong enough to secure the peace while again enjoying the luxury of cars, refrigerators, and the like. The U.S. will be healthy and sound—a foundation for economic well-being for the western world.

To be sure, the whole economic message is just what you might expect in this election year. Defense has the No. 1 priority, but the Fair Deal is there, too.

• **Arms Costs**—The message presented some figures: It noted that rearmament will cost around \$50-billion during the fiscal year that ends next June 30. For the following 12 months, the bill will come to \$80-billion or \$83-billion.

Since the Korean outbreak, the armed forces have been doubled; deliveries of military goods have reached \$20-billion. With 5.5-million workers in defense industry, deliveries are now running at a \$45-billion-a-year rate—a figure that will climb for another year or so as new materials and fabricating capacity costing tens of billions come into production.

By the end of this year, steel capacity will hit 118.5-million tons, 22% above the pre-Korean level. For aluminum, the goal is an increase of more than 50%, or 400,000 tons. Electric power output and oil refining capacity will grow by 24% and 9% respectively.

• **Tax Picture**—To pay for rearmament—and around \$20-billion in nondefense spending—Truman expects taxes now on the books to bring in around \$62-billion this fiscal year. For 1953, the take may go up to \$67-billion or \$70-billion.

By this reckoning, the Treasury will be in the red for \$8-billion in fiscal 1952, and for about \$13- to \$15-billion the following year. (Private estimates of the deficits, by government economists, run around \$4-billion lower; lags in arms deliveries and more reve-

nue due to continued income rises are expected to trim the total.)

Truman wants another round of tax increases to help close the gap. He asked for the difference between the \$10-billion he requested last year and the \$5.6-billion Congress finally voted. Rate increases and loophole plugging were his suggestions.

Some of the President's other recommendations were:

• **Strengthen price and credit controls** by repealing the Capehart and Herlong amendments and removing the limitations on the Federal Reserve's power to regulate consumer credit. Truman also wants authority to set slaughtering quotas.

• **Repeal the import ban** in the Defense Act on fats, oils, and dairy products.

## II. THE U.N.'S EXPERTS LOOK AHEAD

"For the first time the problem of international economic instability is a manageable one."

That's the opinion of five economists picked by the United Nations to study ways to reduce the international impact of recessions. The experts: James W. Angell, Columbia University; G. D. A. MacDougall, Oxford University; Javier Marquez, International Monetary Fund; Hla Myint, Oxford University; and Trevor W. Swan, Australian National University.

The group starts with the premise that large depressions, such as the U.S. had in the early 1930's, are things of the past. But they assume that dips of the intensity and duration of 1937-1938 will probably be with us for a while yet.

• **Premise**—The report—Measures for International Economic Stability—opens with the words "It is now generally accepted that the major countries have both the will and the means to avoid deep and prolonged depressions."

A lot of people will argue that point. Even today, with good business over the short run seeming almost certain, there are many dissenters. And a large number of businessmen, looking ahead of the time when the armament program starts downward, are worried about a dip—and a deep one.

The report, however, assumes no more big depressions in the U.S., or any other country. Its three major recommendations for damping the international effect of future swings in economic activity are based on the assumption that these swings will be of 1937-1938 dimensions. The recommendations are:

• The stabilization of world commodity markets through such methods as long-term contracts, quota systems, and buffer stocks.

• Expansion of lending by the

This would enable our allies to get along with less U.S. aid.

• **Increase social security and unemployment insurance benefits.**

• **Authorize public power development** including the St. Lawrence Seaway.

• **Aid agriculture** by replacing the sliding scale provision of price supports with a flat 90% of parity guarantee. The President also urged "direct payments" to farmers instead of price supports on perishables—the Brannan Plan.

• **Revise Taft-Hartley.** Truman didn't get specific, but the fact that he said "revise" and not "repeal" may mean some action this year.

Some of these proposals stand a fair chance of passage. But Truman's tax, control and welfare recommendations can pretty much be forgotten.

International Bank for Reconstruction and Development in case of a recession. That would compensate for a drop in private international investment and prevent a sharp setback to development.

• **Increasing the reserves** in the International Monetary Fund—and in case of recession allowing members to dip deeper into the reserves than they can now.

Taken together, the proposals extend to the international field the anti-cyclical method of handling depressions. Stepped-up lending during a depression will compensate for a loss of foreign exchange caused by a drop in exports. The reverse occurs when the recession eases.

Essentially, the U.N. study is an exploration into how to protect the rest of the world against a business dip in the U.S. The volume of U.S. exports and imports is so great that any significant drop would immediately trip up the economies of a large part of the rest of the world. Dollar reserves abroad are nowhere near enough to fill in for a downturn in the American business cycle.

• **Not So Easy**—There are major difficulties to putting the U.N. program into effect. More capital would have to be raised by the participating nations (and mostly the U.S.). Increasing the lending power of the International Bank and boosting the International Fund's reserves also would entail more capital.

In the case of commodities, a buffer stock agency would be needed, big enough to buy up significant percentages of the world supply of the commodities to be stabilized. That would take plenty of money. And getting price agreements between importing and exporting countries might be difficult.

## Tin Deal . . .

**. . . is chief gain, maybe chief snag in Truman-Churchill raw materials package. It may break Bolivia jam.**

One of the solidest results of the Truman-Churchill talks was a raw materials deal that's designed to bring scarce tin and aluminum to the U.S., scarce steel to Britain.

The broad outlines of the deal were quickly O.K.'d by the political chiefs:

- Britain agrees to "lend" us 33-million lb. of Canadian aluminum this year, to be repaid next year.

- In exchange, the U.S. will supply Britain with about 1-million tons of steel or steel-making materials.

- The British government will supply us with 20,000 tons of tin this year at \$1.18 per lb.

- **Details Underway**—That's about the size of the package that was agreed to at the White House. The experts and technicians are still working out a score of details—many of them so important that at midweek some U.S. negotiators felt major changes in the agreement were still possible.

- **Tin Snag**—The real troublemaker in the package is tin. Tin has been a bone of contention ever since Korea. We must import our entire supply, so we began a big stockpiling and buying program. World tin prices quickly shot from around 75¢ per lb to \$1.80. In March the Reconstruction Finance Corp., sole U.S. tin buyer, stopped buying. Tin prices immediately slid to the neighborhood of \$1.10.

Pricewise, there was no doubt about it: RFC's move was a big success. But negotiations to get a firm contract at \$1.12 per lb. dragged on and on.

Chief mobilizer Wilson and Fleischmann got worried when it became obvious that—with no tin coming in—they must either dip into the stockpile or put new and more drastic controls on domestic users of tin. Pressure built up to close a deal even if it meant topping RFC's ceiling offer of \$1.12.

- **Off the Hook**—In the end, it took a Truman-Churchill meeting to get all sides off the hook.

The U.S. needed tin, obviously, and even RFC isn't unhappy about the \$1.18 price; that's a lot below \$1.80.

The British needed dollars, obviously, and Malayan tin has always been one of Britain's biggest dollar-earners.

But when it came to tacking down the details, the U.S. experts wanted to hang onto the elbow room they knew they'd need in dealing with other tin producers.

For instance, 20,000 tons of tin takes

care of only 30% of our annual needs. Suppose the U.S. pays more than \$1.18 to other producers. Do the British automatically get the higher price, too? Britain says yes; we say no. There were other equally knotty details to be thrashed out.

- **Bolivia Ahead**—As soon as these details are spelled out and approved, RFC will go to work on a long-term contract with the Bolivians, who've been the big supplier of concentrates for the U.S. smelter at Texas City, Tex. The Bolivians have been holding out for \$1.50 on the grounds—admitted by RFC—that Bolivian production costs are higher. But RFC says its own cost studies reveal that the \$1.18 price leaves the Bolivians plenty of profit.

RFC officials admit that \$1.18 becomes in effect a price floor for a year or maybe more, and odds are now that the Bolivians will get a somewhat higher price.



## Trouble in Baltimore

Baltimoreans got to their jobs this week by bumper-to-bumper auto travel as a strike of 3,000 Baltimore Transit Co. employees entered its second week. No street cars, buses, or trackless trolleys were running, but everyone apparently was getting along pretty well. Retail trade was down—but it always is in January.

AFL workers struck Jan. 10 for a 24¢ hourly raise. The company offered 4¢ plus an additional 3¢ if it could get a fare increase. A possible break came this week when the union said it would settle for the "allowable" raise under Wage Stabilization Board rules. The union says this would be 14¢.

## Planes, Quicker

**That's what the Air Force is seeking when it orders 20 huge presses to mass-produce components.**

The U.S. Air Force has finally decided to build giant presses like those already used by the Russians to get mass production of plane parts. The decision came this week—after the Pentagon spent almost two years blowing hot, then cold on the program.

It's a \$210-million program calling for nine heavy forging presses and 11 extrusion presses. Two heavy forging presses will have 50,000-ton capacities. The 18 other machines will range in size from 35,000 tons down to 8,000 tons.

- **Used Abroad**—German aircraft producers were the first to use such presses. After the war the Russians converted some of these to their own use. Russians are figured to be delivering 100 Mig-15's per month to Korea, compared with about 20 of our Sabrejets. Only recently has the U.S. taken another look at the heavy presses we took out of Germany at the end of the war.

Now the Air Force hopes—perhaps optimistically—to put the new machines into aircraft production by mid-1954.

- **Canceled Biggest**—Original plans submitted by the Munitions Board and the National Security Resources Board over two years ago called for at least one 75,000-ton forging press plus several 50,000-ton machines. The big press was dropped as too expensive. Estimated cost: \$7.5-million.

Biggest now will be two 50,000-ton forging presses to be built by Loewy Construction Co. and Mesta Machine Co. Work is already in progress on the Loewy machine. It is expected to be complete within 18 months. Mesta estimates two years' delivery on its big job. Wyman-Gordon Co. of Worcester, Mass., will run the Loewy press, and Alcoa of Vernon, Calif., the Mesta.

- **One German Press**—Nineteen presses will be built by U. S. manufacturers—Loewy; Mesta; United Engineering & Foundry; Baldwin-Lima-Hamilton; and Lombard Corp. The one exception is an 18,000-ton extrusion press to be shipped from Germany.

The Air Force will retain title to the machines, distributing them to contractors on a direct loan or lease basis.

The big reason for the Pentagon's delay in deciding to make the presses was this: Until now, the Air Force feared its present buildup would have been nearly completed before it could get a single press into operation. They're too costly to operate on much less than full-capacity basis.



# Mobilization Unemployment Hurts—in

Last week the government moved in several directions to still the clamor over "conversion unemployment"—the rising number of workers caught in the dead spot between curtailed civilian production and still-to-come military work.

- **Comptroller General Lindsay Warren** ruled that the government didn't have to award contracts to the lowest bidder if award to a higher bidder would throw defense work into areas of job distress.

- **After first refusing**, chief mobilizer Charles E. Wilson finally restored enough second-quarter copper to the auto industry for 800,000 cars. If substitute materials can be found National Production Authority will allow production of up to 930,000 cars (BW—Jan. 12 '52, p140). Industry and labor sources claim that if the original 20% copper cutback had stayed in effect, it would have added 70,000 or 100,000 workers to Detroit's already swollen jobless rolls.

- **Wilson set up a survey team** to ferret out unused plant and ma-

chine capacity, and put it to work.

- **The Senate Small Business Committee** is preparing for hearings that may separate wheat from chaff in rumors that new plant construction is being approved at a time when small shops have idle capacity.

- **New York's Sen. Herbert Lehman and Rep. F. D. Roosevelt, Jr.**, demanded that something be done about the drop in New York City's construction industry. In November, the city's building employment had fallen off 5.3% from October. The drop was partly seasonal, but still the sharpest since 1946.

All these moves, and others, have been reactions to widespread talk about the increasing conversion unemployment, and the failure to use available small-shop metalworking capacity.

With the wave of protest increasing, BUSINESS WEEK reporters last week tried to find out how much of the talk sprang from real trouble. Correspondents in many cities asked questions, came up with these answers:

## I. IT FOLLOWS CIVILIAN CUTBACKS

In most areas there is little unemployment except among the hard core of the industrially unemployable. But there are three major exceptions: Detroit, New York City, and New England.

- **Detroit Worst Off**—Conditions in Detroit—and in Michigan as a whole—are by far the worst. Last week, some 135,000 people were out of work in Detroit, 175,000 in the state as a whole. Enforced cutbacks in auto production are the biggest factor. And defense jobs opening up later in the year are not expected to put more than 71,000 people to work. The Michigan Employment Security Commission rather optimistically estimates that a quarter of the present unemployment is due to car-model changeovers, and will end soon.

However, there seems to be little doubt that things will get worse before they get better in Detroit. Even MESCC predicts 156,000 idle in Detroit by June, 190,000 in the state.

- **Shares Dim View**—The point that unemployment would get worse got backing in Washington early this week. Secretary of Commerce Charles Sawyer

told congressmen that there would be a substantial jump in unemployment in the second quarter, that 1952 would see the peak impact of the defense program. Yet Sawyer added that—overall—unemployment right now is at an almost irreducible 1.6-million. He didn't think increased idleness this year would prove serious.

- **New York Spotty**—New York City's problems, less serious than Detroit's, are rather specialized, largely confined to the building trades. The State Department of Labor reports that building employment dropped 10% between October, 1950 and October, 1951. In the same period, it rose 4% nationally and 7% in upstate New York.

Over-all employment remains high in the city's industry as a whole. But the state labor department points out that the rosy totals conceal considerable underemployment. The average work week in the city is only 36.6 hrs., compared with 38.8 hrs. for the state and 40.4 hrs. for the nation.

- **New England's Case**—The third unemployment area—New England—has the most specialized conditions of all. In some areas, such as Providence,

there is heavy unemployment in some industries, while others, virtually next door, are starving for manpower.

Most of the trouble is due to a cutback in textile production, after earlier overproduction had built up excessive inventories. The situation is expected to iron itself out in time.

In Providence, the jewelry makers are also suffering from earlier overproduction. Just as they were ready to pick up again, their copper allocation was cut to 5% of base-period use. NPA recently eased their pain by boosting copper allocations back to 25% of the base period.

In Rhode Island, textile and jewelry layoffs between them account for a large share of the 8.8% unemployment in the state's labor force. Metalworking plants—the state's second ranking industry after textiles—are running at top speed.

When you have ticked off Detroit, New York City, and New England, you've just about completed the unemployment roster.

## II. MACHINES IDLE

A favorite story of the Senate Small Business Committee concerns the \$8-million plant being built at Dayton, Ohio, by the Delco Div. of General Motors. The plant is primarily for aircraft landing gear struts; its certificate of necessity was granted by Defense Production Administration on the recommendation of the Defense Dept.

The senators find two catches in these proceedings. Their own research, they say, shows that (1) there are small companies ready, willing, and able to produce the struts, and (2) GM itself already has idle facilities that could do the job. The senators say that neither Defense nor DPA-NPA made any check to see if the new plant was necessary.

The senators seem to think that their hearings will add some horrible examples to the dossier. Maybe so, but the BUSINESS WEEK survey indicates that they will have to scratch hard and deeply. The consensus: There isn't much idle metalworking capacity, and what there is suffers from notable limitations.

- **Few Idle Plants**—Really big empty plants, available for conversion, just don't exist. From Buffalo comes the story of Twin Coach Co. being reduced to renting space in an airport hangar, fixing it up at considerable expense. Cleveland reports even multistoried old dogs of buildings are snapped up as fast as they are vacated.

No space at all, says Chicago; very little, says Pittsburgh; little or no space



# Three Areas

going begging, reports Milwaukee. There are no dissenting voices.

• **Some Idle Machines**—The story is much more complex when you get down to idle machine time in going shops. There seem to be lots of small shops with time on their hands, lots of mills and lathes doing nothing part of the time. But it's another question whether they could be efficiently harnessed to defense production via sub-contracts.

From Boston comes a report that pretty well sums up the picture. There's plenty of unused metalworking capacity scattered around New England; its owners want defense work. Trouble is, most of the shops are too small, lack special purpose machinery, can't meet the required tolerances. The larger shops generally get jobs as fast as they find idle machines. The little ones have more problems than just lack of size: (1) They don't know where to go to get defense work; (2) many prime contractors still prefer to expand their own plants rather than share the work.

Minneapolis is one city that complains about having considerable open time on its machines. Plants report lots of available lathe, tool, and jig time, though no more gear work can be handled. The whole area claims it is on short rations of defense work.

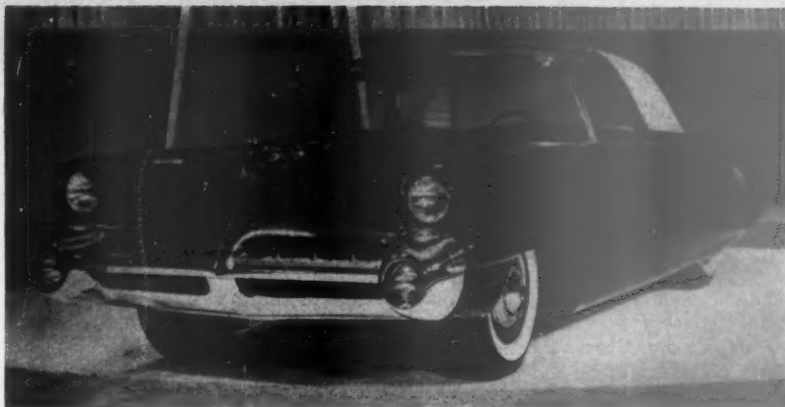
• **Midwest Varies**—Split opinions pop up in St. Louis. The Chamber of Commerce reports all machine operators busy now, with more war work on the way in the next two or three months. The local Small Business Council takes a dimmer view. Recently it polled 28 metalworking or service and plating companies.

Only four reported no idle time. Five said they had 25% idle capacity, 12 said 50%, four said 75%. Like the wise old owl, three said nothing.

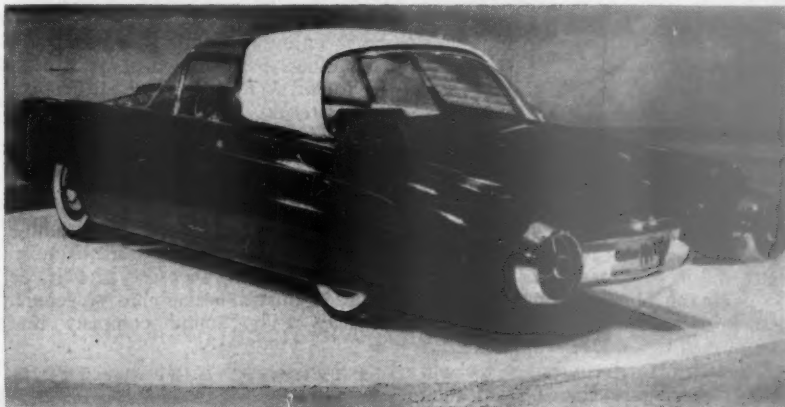
Vacant time was what Cincinnati has least of. One source said: "For unused machinery capacity, I believe you could write off Cincinnati—and probably all of Ohio." Others went almost as far. But there was one note of caution: By spring, quite a few plants may be needing work.

Other Ohio cities reported a little idle time. Columbus said there was some, but very widely scattered, mostly on machines already being used for one shift. In Cleveland, the platers and stampers had some idle time.

All in all, the picture indicated that here and there machines were sitting idle. Whether there are enough of them to be harnessed efficiently to subcontracting work is another question. Both the Senate committee and mobilizer Wilson's survey team would like to find the answer.



FORD'S PILOT MODEL, the Continental Nineteen Fifty X, will serve as a laboratory for the development of new features. Already being studied are . . .



CURVED WINDSHIELD blending into clear-dome top; a nonglare top over front seat that retracts, higher compression and more power—as . . .

## Ford Shows His Dream Car

Automobile previews in the grand manner returned to Detroit last week, when Ford Motor Co. let 300 writers take a peek at its new experimental car, the Continental Nineteen Fifty X. It was a show designed to start the guests' typewriters clicking. They hadn't seen anything like it for a long time—not since they'd taken in the glittering lushness of General Motors' show in New York three years ago (BW—Jan. 22 '49, p65).

Apparently there was no ceiling on the budget. The writers—assembled from all over the U. S., some even from Europe—traveled on Ford tickets. They were lodged in privately provisioned hotel rooms. They were entertained by a \$5,000 stage show. And they went home clutching shiny new initialed briefcases (which carried the publicity stories), miniature 1952 Fords, and other souvenirs. Impromptu estimates put the party cost at about \$70,000.

• **Star**—Center of the hoopla was the new experimental car—Ford's answer to General Motors' Le Sabre (BW—

Aug. 4 '51, p78) and Chrysler's K-310 (BW—Nov. 24 '51, p21). Ford's Continental has the long sweeping lines of its GM and Chrysler counterparts and some of the same engine thinking—higher compression, more power, and better carburetion.

It has other innovations, too. Overall height is 56.7 in., length, 220 in. The top of the car is in two sections. The leather-covered canopy over the rear is permanent, but the glare-resistant glass over the front compartment retracts into the canopy at the driver's desire. Other refinements include a dictating machine and telephone.

• **In the Offing**—Although the Continental stole the show, guests were interested in the redesigned 1952 models that Ford will announce in a few weeks. Two new engines were unveiled, both overhead-valve jobs. One is a 101-hp., 6-cylinder model for optional Ford car installation. The other is Lincoln's new 160-hp. V-8, housed in a completely redesigned body shell.

# Tax Cash—Companies Have It

And if they haven't, they can get it by borrowing. Survey shows few companies will be backed to the wall by the Mills Plan. Little change so far in spending or dividend plans.

On Mar. 15 of this year, three things will cause corporations to pay into the U.S. Treasury more money than ever before in history. The three: (1) strong 1951 earnings; (2) a higher income tax and an excess profits tax on those earnings; and (3) the Mills Plan, which will force companies to pay in one lump 35% of their total tax bill.

That combination—adding up to the biggest drain ever on corporate cash—has had economists puzzling now for several months. The center of most of their pondering has been one question: Will companies have the money to meet the bill? What will the payment do to dividends, expansion plans, and policy in general?

• **Prepared**—This week a survey by BUSINESS WEEK correspondents across the country gave early, but reassuring answers. Most companies either:

- Have salted away for the payment well in advance.

- Or can borrow to meet the payment fairly easily through their regular lines of credit.

Although many businessmen feel put upon in having to pay 70% of their total tax bill in the first six months of the year (the Mills Plan this year requires 35% in each of the first two quarters, 15% in September and December), almost no one is desperate. Few will have to cut dividends or delay capital spending plans to put together the payment. In fact, a significant number of companies believe the accelerated payment is a good idea, that it is a step toward putting corporate taxes on something like a pay-as-you-earn basis.

Comments like these are typical:

"You can't get hurt much by a 10% stepup. And even if you do feel some pain, it only happens once."

"This is only an added headache—not a major affliction."

"Sure, I'll have to go to the bank, but in this business I've always had to around tax time."

"When you're drowning in 15 ft. of water, who's going to get excited about having to drown in 16 ft.?"

• **Laid Away**—Among bigger corporations, it's hard to find a case where management has not prepared for at least the first six months' payments. A majority of the companies surveyed by BUSINESS WEEK has laid away for the entire year, mainly in government tax anticipation bills. "It's no more than sensible fiscal policy," one says.

"There's no reason for using tax money as working capital."

Some medium-sized and small companies admit to less virtue. They say they have had to dip into tax money to finance inventory or building, and that they will have to make up the funds now by borrowing. Some machine tool builders, especially, fall in this class. They, and other companies like them, will either have to get new loans or extend existing ones. The net effect, one economist thinks, will be a retiming of the seasonal slump in business borrowing that usually sets in around March; the dip will come a little later this year.

• **No Trouble**—By and large, companies foresee little trouble in getting loans if they have to. It seems only natural, however, that there will be some cries of anguish as tax deadline time nears. But the cries are likely to be audible only because they'll be heard against a background of general silence. "The sound company that

made money last year," one tax accountant says, "either has the money or can get it. The only screams you'll hear will come from the chronically underfinanced operation whose bank is finally saying no."

Incidentally, several company controllers point out that under the excess profits tax it would often pay a company to borrow and clean up its entire tax liability in one payment.

• **Plans**—Here and there, companies will say that they have had to postpone some expansion plans because of the bigger tax payment. A West Coast motor carrier will delay the start of a new terminal a couple of months; a power-tool maker says it is "thinking twice about authorizing new plant spending." These are the minority, however. Most companies—particularly the big ones—are going ahead with plans as scheduled now, although they make some reservations about the future.

Will companies have to cut dividends? Several say yes, but only one will blame it solely on the accelerated tax payment. The rest cite a combination of reasons—poorer earnings and the higher tax rates being the main ones. There seems no sign of any serious inventory liquidation, although almost all companies say they will keep a closer control on stocks over the coming year.



## Stoking Up an Atomic Reactor

For the first time, a photo is released showing how the "fuel" is fed into an atomic reactor. Here an operator at Oak Ridge (Tenn.) National Laboratory shoves alu-

minum-jacketed slugs of uranium into the loading face of a graphite reactor. The uranium is not radioactive when it goes in but is deadly when it comes out.

# War on Frozens

Fresh fruit and vegetable industries gang up on frozen foods. They aim to hold their place in the family budget.

Next week, the two national associations of the fresh fruit and fresh vegetable industries will merge. At the same time, they will try to raise funds for a campaign to sell housewives on fresh, rather than frozen foods. That may turn out to be a long-range program, because they'll have to educate small businesses in both associations in the value of advertising.

The merger was dictated largely by economic reasons. First, the National League of Wholesale Fresh Fruit & Vegetable Distributors has less than 1,000 members—mostly east of the Mississippi. Second, the United Fresh Fruit & Vegetable Assn. has 2,300 members—35% growers and grower-shippers, 45% wholesalers, the rest brokers. Both associations are made up of a miscellany of growers, grower-shippers, and distributors with different problems, but having enough in common—transportation, shipping, promotion—to use the same offices.

- **75% Fresh**—Some of the grower-shippers are already in the frozen food business. But in it or not, they have to face the fact that frozen foods, like canned foods, are here to stay. Last year the industry sold 587,101,000 lb. of frozen vegetables, compared with 346,208,000 lb. in 1947. Even so, 75% of all fruits and vegetables sold in 1950 were fresh. And now that pre-packaging and other methods of preventing spoilage and shrinkage have been developed, fresh produce represents a highly profitable department for a retailer, if he knows how to operate it.

- **In the Bag**—Today, grower-shippers in Florida husk and trim ears of corn and ship it in cellophane bags as far as Boston. Tomatoes and spinach have been packaged for some time. The retailer is willing to pay a premium for the packaging because it cuts his losses.

Fresh lima beans and fresh peas—best sellers of the frozen food industry—are just about dead ducks in the fresh vegetable field. They involve too much work for the housewife, and once shelled they're too perishable to stand packaging.

But 70% of the total volume of fruit and vegetable produce is estimated to be in potatoes, apples, citrus fruits, cabbage, onions, and celery. These are all staples, and all—with the exception of frozen citrus juice—safe so far from big inroads by the quick freezers.



NO SHRINKING VIOLET. With Donald C. Cook taking over, Washington sees . . .

## Headlines Coming Up for SEC

A new, aggressive chairman and a congressional probe will take Securities & Exchange Commission into new fields and make it front-page, election-year news.

After a decade of self-sought obscurity, the Securities & Exchange Commission seems slated for the limelight again. Here's why:

- A congressional subcommittee has started an investigation into SEC's practices and operations.

- Any day now, President Truman is expected to nominate young, aggressive Donald C. Cook to be SEC's new chairman.

Of the two, the investigation will probably do more to bring SEC out of its obscurity. Actually, the probe was conceived as a straightforward investigation of all phases of SEC's operations. The committee's main objective is to find out just how the commission construes and carries out the intent of Congress.

- **Front Page**—Whatever the outcome, though, the charges leveled at the commission should be good for months of headlines. Already, the committee is tracking some hot leads. For one thing, it has received charges, as yet unsubstantiated, that present and former SEC employees are peddling influence, speculating on inside information or modifying decisions in favor of special interests.

Another point the subcommittee wants to look into is how far SEC

should go in censoring new security issues. There have been instances—notably the Tucker auto case—where truthful registration statements weren't enough to protect investors. Chairman Leon Heller (Dem., N. Y.) and his subcommittee want to find out whether the law can be strengthened here—and if so, how.

- **In Solid**—This is an issue on which Cook stands solidly with his predecessors. Cook insists that SEC should not, as it does now, have the power to evaluate or reject a new flotation. Such power, he feels, would be tantamount to a veto over industrial expansion.

Although Cook goes along with his predecessors on this and some other issues, there's no doubt that his tour will be a peppy one. Even so, it probably won't approach the fireworks of SEC's early days.

- **The Good Old Days**—In the early thirties, say, the SEC was the arch-symbol of the New Deal and the principal target of all the New Deal enemies. To Wall Street the commission's very existence spelled the end of an era—almost the end of the world.

In those days, everything SEC did was controversial and big news. Its chairmen were colorful personalities with ideas and the ability to put them



over. Congress and the public were constantly aware of the commission's doing.

• **Settled Down**—By the end of the thirties, however, the picture had changed. The Jerome Franks and Bill Douglas had moved on. The courts had upheld the constitutionality of the securities and holding company acts, and had affirmed the commission's administrative policies. Scandals that rocked the stock exchange ended Wall Street's active opposition.

In the years that followed, SEC has quietly enforced the "truth in securities" mandate that Congress gave it. It has also supervised revamping of private utilities' finances into regionally integrated systems. In the process, it gained a reputation for outstanding efficiency. In fact, the Hoover Commission characterized the operation as "the perfect example of an administrative agency at its best."

• **Up and Up**—Under Cook, the commission's basic responsibilities aren't going to change. SEC will still concern itself with policing the exchanges, forcing disclosure, and supervising the break-down of utility empires. But some new things will be added—and they will get attention. Cook's career to date pretty much guarantees this.

His first government job was with SEC in 1935, when he was 26, as a financial examiner in the registration section. He became assistant director of the utilities division in 1943. He had studied law on the side and, at this time, he took on an extra job: special counsel to the House naval affairs committee. After this he really began to rise.

He became successively, executive assistant to the Attorney-General, head of the Office of Alien Property, and then vice-chairman of the SEC.

• **Clear View**—Cook has a pretty good idea of the programs he would like to launch when he takes over. For one thing, he wants to see some revision in registration requirements of corporations under the commission's jurisdiction. For established, listed concerns, he wants to make the forms and procedure easier and shorter; but he'd like to bear down hard on new promotions by big firms that are not now required to register.

• **New Fields**—Another project Cook would start: a series of studies of the nation's utility systems. Under Section 30 of the Holding Company Act, SEC has authority to check up on how well its revamping is working.

Cook would also like to look into the whole question of debt versus equity financing of utilities. He feels that when the equity market is relatively strong, expanding companies should raise as much of their capital as they can from this source.



SWEATER BURNS fast if made of untreated brushed rayon. Fringe operators who sell...

## "Torch Sweaters" Bring Textile Woes

One day last December, a man in California lit a cigarette, just as he had thousands of times before. But this time was different. About half way through his first drag the sweater he was wearing burst into flames. A few days later an unknown spark landed on the sweater of another man sitting quietly in a courtroom. It, too, burst into flames.

• **Bad Publicity**—This unnerving and painful experience didn't stop in California. By last week, at least 20 people across the U. S. had reported that they had been the victims of what the press began to call "torch sweaters" or "exploding sweaters." So far, the flaming sweaters had burned no one—except the textile industry. Faced with the worst publicity it had had in years, the industry in turn was burned up at the fringe operators who had brought it on by putting the inflammable stuff on the market.

The trouble was that the inflammable sweaters had been made from one of the commonest synthetic materials used in clothing—brushed rayon. What alarmed the textile industry was that the public would get the idea that everything made of brushed rayon would go up like tinder.

• **The Real Story**—This week the industry was trying to convince the public that only a small percentage of brushed rayon is so highly inflammable. If the cloth is either properly constructed, or is treated with a chemical (an expensive process), it will be as fire-resistant as any other fabric. Legitimate textile companies always do one or the

other. What made the exploding sweaters explode was the fact that the makers of the cloth had shaved costs by omitting chemical treatment of the cloth when it was brushed into a high nap.

To emphasize this point the industry pointed out that all the inflammable sweaters were sold by itinerant street peddlers; you couldn't buy one in a store. This was admitted by Philip Toffler, a New Yorker who had been making the sweaters and selling them to peddlers. He did not know that they were so inflammable until last week. When he found out, he immediately quit making them.

• **Cut From Cloth**—What Toffler had done was to buy the cloth already knitted from the Empire State Mills, Inc., in New York. He had failed to test the cloth for fire, and had gone ahead and cut and knitted sweaters from it. He had sold the sweaters to six peddlers for about \$2 apiece. The peddlers charged customers from \$3.50 to \$13.

What has the industry most worried, of course, is that the fringe operators who make and sell the stuff are threatening a safe, sound, and legitimate market. This week, Max Doft, president of Princeton Knitting Mills, Inc., hastily called a press conference to make a reassuring statement.

• **Protective Laws**—The State of California, said Doft, has a law requiring manufacturers of this type of fabric to submit samples to the state fire marshal more than once a month in order to protect the public.



# "That's it! I'll bet that's the answer to my coating problem"

"Ted Hubbard, what are you talking about?" asked his wife.

"That wax paper you're tearing . . . that may be the answer to the thing that's been giving the can manufacturers all the trouble."

Ted, an Inland mill representative, had been working for some time on a very peculiar problem in the plant of a large can maker and Inland tin plate customer. In lacquering tin plate for can ends, this customer's sheets had been coming through with "eye holes" (pin-head-size spots where lacquer failed to coat). Neither Ted, nor anyone else, had been able to learn why.

Ted, idly watching his wife tear wax paper from a roll, remembered: *Wrapping tin plate packages in wax paper was standard practice for many steel producers, and paraffin, a mineral oil derivative, would not mix with lacquer.*

Ted had a hunch.

Next day, the problem was solved! Ted proved that when the tin plate was removed from the wax paper wrapper, microscopic wax particles adhered to the edges of the sheets. During the lacquering process, these particles were drawn up from the edges and across the sheets by suction from the lifting device . . . were picked up by the roller coaters . . . and wherever a particle lodged, lacquer failed to coat that spot on the sheet. This was the cause of the eye holes.

Tin plate producers switched to a different type of paper wrapping with the result: no more eye holes! INLAND STEEL COMPANY, 38 South Dearborn Street, Chicago 3, Illinois.

*Names used are fictitious*

**Making Steel  
Do Your Job Well  
Is Inland's Job**



Your Scrap is Needed by The Steel Industry for National Defense



### **MISTER, WE'RE WAITING FOR YOU!**

Waiting for you to get mad enough to do *more than* let off steam. Mad enough to get behind your local government and help break bottlenecks by building adequate and safer roads and streets. To tell your neighbors that our deteriorating road system is strangling industry...and even your way of life. That inadequate roads mean inadequate national defense. That if all the new cars built since the end of World War II were lined up end to end on all the new highways built since the end of the war, there would not be enough room to accommodate them. That states have been collecting gasoline taxes for years and not using them for roads. That if our road system can't keep abreast of our traffic... watch out America! Get mad enough to do this until public demand builds new roads for today's and tomorrow's needs... the American way.

### **THAT'S WHAT WE'RE WAITING FOR!**

In this country we have the best road building industry on earth. It has the manpower...the equipment...the brains to give us the finest, safest highway and street system on earth. But they can't do a darn thing until you and other taxpayers demand "a dollar's worth of road for a dollar's worth of taxes."

**THE THEW SHOVEL CO., LORAIN, OHIO**



## **BUSINESS BRIEFS**

How much rain does a rainmaker really make? To answer the skeptics, rainmaker Irving P. Krick (BW-Jul.14'51, p22) last week offered the National Weather Improvement Assn. \$100,000 to set up a long-range system of evaluating cloud-seeding. The group, meeting in Denver, accepted the offer.

RFC's \$154-million suit against Carl G. Strandlund, president of the extinct Lustron Corp., was settled out of court this week. RFC said Strandlund gave up all claims, stock, patents.

Planes led ships last year for the first time in carrying passengers from New York to foreign points. The score: 438,693 persons left by plane, 342,923 by ship. Ships held a lead in bringing passengers to New York, only because 85,148 refugees arrived under the displaced persons program.

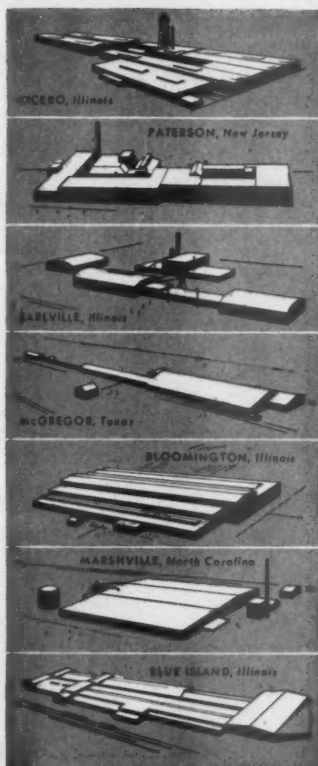
Three former executives of Colonial Airlines are the principal defendants in a suit filed this week by the airline. The company seeks to recover nearly \$500,000 from Sigmund Janas, Sr., its former president; Sigmund Janas, Jr., and Alfred N. Huson for alleged padding of expense accounts and misuse of company funds.

A new mobilization agency was recommended this week. The congressional "watchdog" committee on defense production (BW-Jan.12'52,p24) suggested an Office of Electric Power with enough muscle to break bottlenecks in the power expansion program.

The Lorain (Ohio) Journal decision by the Supreme Court (BW-Dec.15'51, p28) paved the way for settlement of another newspaper antitrust case in Ohio. Justice Dept. announced that the Mansfield News-Journal has agreed not to refuse advertising from companies that buy time on a radio station.

Opening of the last 9 mi. of the 118-mi. New Jersey Turnpike this week made it possible to drive from New York City to Wilmington, Del., in two hours. In the three months after the first section was opened, more than 1-million cars used the toll road.

A liquid fuels industry independent of petroleum will grow up "sooner than most people think," said Dr. G. F. D'Alelio, research manager of Koppers Co., Inc. Koppers leans toward gasification and hydrogenation of coal rather than to low-temperature coal carbonization (BW-Dec.15'51,p84).

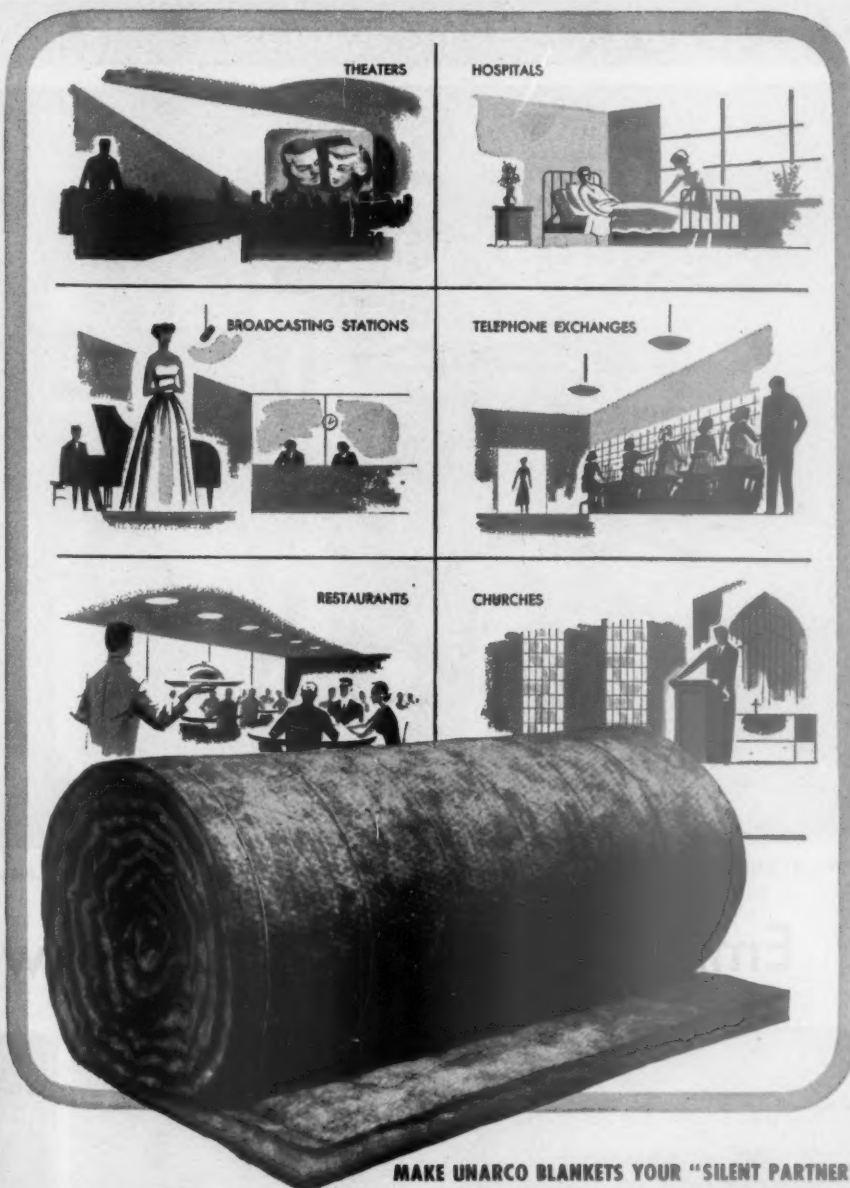
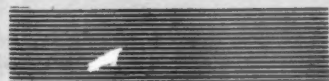


**7** plants serve many industries' needs for . . .

- **INSULATIONS**  
for industrial, commercial and railroad use
- **ASBESTOS PACKINGS and GASKETS**
- **ASBESTOS TEXTILES**
- **STEEL FABRICATIONS and Hot-Dip Galvanizing**
- **REFRIGERATION SPECIALTIES**  
for auto trucks, trailers and railroad equipment
- **RAILROAD EQUIPMENT SPECIALTIES**



**UNION ASBESTOS & RUBBER COMPANY**



**MAKE UNARCO BLANKETS YOUR "SILENT PARTNER"**

## Why Shout when you can Whisper?

If you want to reduce noise-level in enclosed areas, or improve acoustics in audience rooms, insist on Unarco fibrous-glass sound-absorbing blankets. High efficiency and versatility are combined with extremely light weight in a wholly-inorganic machine stitched assembly that won't burn, deteriorate, absorb moisture or odors. Easy to install. Designed for all commercial and industrial acoustical applications.

*Complete facilities for fabricating sound-absorbing and thermal-insulating blankets to specifications.*

392 SOUTH MICHIGAN AVENUE • CHICAGO 4, ILLINOIS



# LABOR



THE STEEL CASE: With the nation's wage and price structure in the balance, Murray makes labor's bid for higher pay before a

## Employers and Unions Await WSB's Bi



DURING RECESSES John Stephens of U. S. Steel (left) helped arm the employers on the panel against CIO arguments. He briefs Adm. E. W. Mills and John Bane . . .



. . . while Murray caucuses with union aides and associates, who gave him their judgment





six-man Wage Stabilization Board panel.



IT WAS CIO'S INNING when WSB's special steel panel sat in Washington last week. The industry is still to be heard from, opens its arguments Feb. 4 in New York.

## Big Decision

(Story on  
page 36)



on how his points were getting over to the panel. Meanwhile . . .



. . . discussions on procedure went on, like this one between Stephens, John Gall, Youngstown Sheet counsel (center) and panel head Harry Shulman. (Turn to page 36.)

# The case of the Paint-Spattered Shirt



The fine paint specks that fell on laundry, automobiles, houses were traced to the nearby plant. Meanwhile, maintenance men at the plant knew that excess paint spray was doing the damage because water nozzles were becoming plugged. But how to correct it? How to keep the paint from building up on the booth walls and ventilating fans, from clogging water lines, nozzles and spray passages? A Dearborn Engineer knew. Treat the water-wall water so that it would form an alkaline film around each minute particle of excess pigment. Effective? Disposal is no longer a problem.



**Know Your  
Dearborn  
Engineer**

This is but another way that Dearborn water treatment and rust preventives can save you time and money. Whether you operate on an oil well or a pipe line, an industrial or processing plant, a railroad or steamship line, your Dearborn Engineer can help you. Call on him without obligation.

**DEARBORN CHEMICAL COMPANY**  
Merchandise Mart Plaza • Chicago 54, Illinois  
Offices in Principal Cities  
In Canada: Dearborn Chemical Company, Ltd., 3454 Dundas St., W., Toronto 9

## Dearborn

TRADE MARK REGISTERED

THE LEADER IN  
WATER TREATMENT AND  
RUST PREVENTIVES



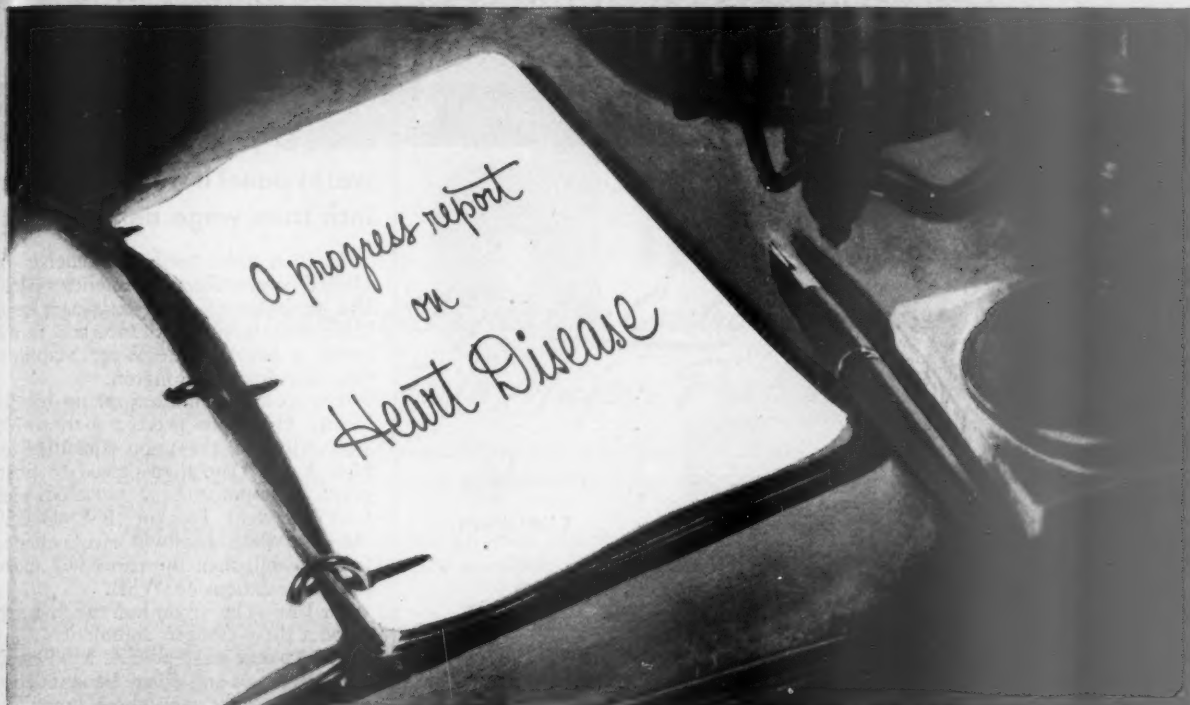
STEPHENS LISTENS at the employer table, as the union continues its case.



THE AUDIENCE LISTENS with rapt attention, intent on following the discussion.



ADJOURNMENT for three weeks. Sessions resume in New York, Feb. 4 (page 36).



**W**ITHIN recent years, research on diseases of the heart and blood vessels has brought impressive advances that are helping to save many lives today.

Recurrent attacks of rheumatic fever—the chief threat to the hearts of children—may be prevented by penicillin or other drugs. New hormone compounds are also proving helpful in treating acute rheumatic fever, even in cases in which the heart has been seriously impaired.

Diseases of the arteries that nourish the heart can be treated more effectively now than ever before with certain drugs that prevent the formation or spread of blood clots. Studies show that under ideal conditions mortality from these causes was reduced about one-third by the proper use of these drugs.

Great strides have been made in curing infections that attack the valves of the heart. Heretofore, such infections were nearly always fatal. Today, two out of three cases are cured.

In addition, other research studies point to progress in the detection and treatment of various heart disorders. Prominent among these are the recent advances in knowledge about how the body utilizes *cholesterol*—a fatty substance in the blood—which is suspected of playing a part in hardening of the arteries.

Diagnostic instruments of unusual precision are also being perfected. These promise to reveal diseased heart conditions much sooner than is possible with present devices.

Even with these and other advances, diseases of the heart and blood vessels continue to be the greatest hazard to life. Some 9 million Americans are affected by them, and they account for about 44 percent of the total mortality in our country.

Authorities say, however, that much can be done to help protect the heart, and reduce the toll from heart disease. Here are some measures they recommend:

**1. Do not ignore possible warnings of heart trouble:** pain or a feeling of oppression in the chest, rapid or irregular beating of the heart, shortness of breath, and excessive fatigue. Such symptoms are often of nervous origin, but their true meaning should be determined by the doctor.

**2. Have periodic medical check-ups.** Everyone, especially those middle-aged or over, should have periodic medical examinations. Such check-ups generally insure that if heart trouble should occur, it will be detected early, when the chances of successful control are best.

**3. Follow a routine of healthful living.** Such a routine should include a nourishing diet, getting plenty of rest and sleep, trying to avoid tension, and *keeping weight at normal or below*. The latter is especially important as extra weight is a contributing factor to several types of heart trouble.

Today, thousands of people with bad hearts are living practically normal lives simply by faithfully following the doctor's instructions. Among the groups aiding research on heart disease is the Life Insurance Medical Research Fund, in which 143 Life insurance companies participate. Since 1945, the Fund has contributed nearly 4 million dollars to support studies on heart and blood vessel disorders.

## Metropolitan Life Insurance Company

(A MUTUAL COMPANY)

Please send me the free booklet, 252S, "Your Heart."

Name

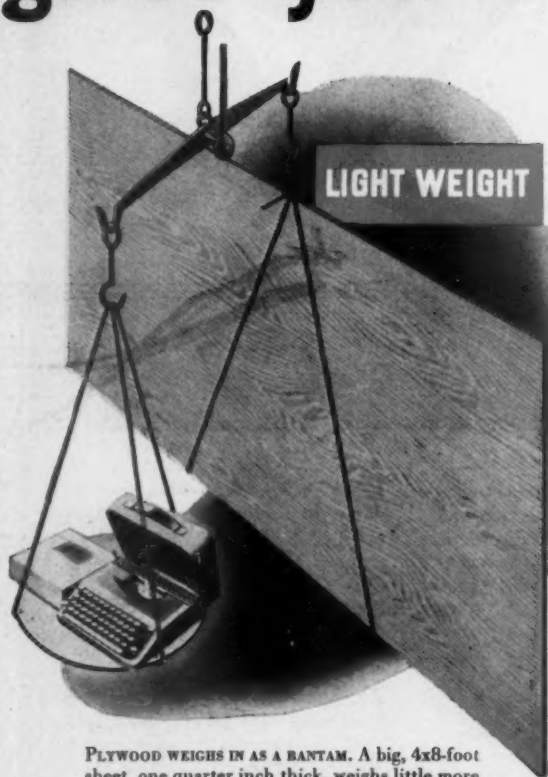
Street

City  State



# Only plywood gives you all

# 6



PLYWOOD WEIGHS IN AS A BANTAM. A big, 4x8-foot sheet, one quarter inch thick, weighs little more than a portable typewriter. Yet this same feather-light real wood panel shrugs off shocks and bruising impacts that would split ordinary lumber, tear or dent metals, shatter composition materials.

This light-weight strength is but one of plywood's unique combination of advantages which make it a standout choice for hundreds of building, maintenance, processing, packaging and product-improvement jobs.

If you have a job where these six important advantages pay off, plan it with plywood. For free fact-filled plywood design folder write Douglas Fir Plywood Association, Dept. 411, Tacoma, Wash.



Douglas fir plywood is real wood, made by "unwinding" giant logs



into thin wood sheets which are inseparably cross-laminated...



to form large, light panels having beauty and great strength



1 Light Weight



2 Cross Laminated Strength



3 Large Panel Size



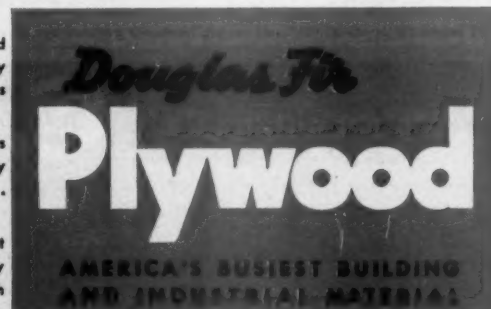
4 Attractive Appearance



5 Workability



6 Tested Quality



## Union Side . . .

. . . of the steel dispute is aired at WSB hearing. Union warns panel it won't budge an inch from wage demands.

In three days last week officials of United Steelworkers of America (CIO) laid their case for higher wages and other concessions in no uncertain terms before a panel of the Wage Stabilization Board in Washington.

The six-man panel was set up by the White House to avert a nationwide steel strike that the union scheduled for New Year's Day, then agreed to postpone in response to a personal plea from President Truman (BW-Dec. 29 '51, p. 32). Both sides will have a chance to sound off, then the panel will make recommendations to WSB.

• **Or Else**—The union had the first say, made a three-pronged argument:

• Present wage policies will permit wage increases and fringe benefits costing 35¢ an hour, well above union demands for a 15¢ general increase, an average 34¢ for widening job differentials, paid holidays, and other demands.

• Steel prices don't have to rise; the steel industry, the union says, can pay as much as 50¢ an hour without raising prices and still make a "reasonable" profit.

• Union shop is no novelty; the industry has had it in its coal mines for 10 years, although it is not enforceable currently because John L. Lewis and other mine worker officials have not signed non-Communist affidavits in compliance with the Taft-Hartley labor law.

• **More to Come**—Panel hearings resume in New York on Feb. 1, when the union will argue for a guaranteed annual wage. Then, on Feb. 4, the "coordinating committee" of 35 steel companies will open the industry's defense against higher wage costs.

Six noneconomic issues were temporarily withdrawn from the panel voluntarily. Both sides believed they could be settled without government assistance, possibly during the three-week recess. If these are not settled by bargaining, WSB may have to make recommendations on them later.

• **Will Hit Back**—The industry itself hasn't had its chance to testify yet. But when it does it's certain to base its case on the loss in tax revenue that the steel companies say the government would suffer if steel wages are allowed to rise and profits are squeezed through denial of an adequate price increase. Spread over industry in general, this could cost the government more than \$13-billion in tax revenues at a time



Mountainous defense orders plus business-as-usual called for peak performance

No. 1 in a Series of Reports on  
Cost-cutting Methods and  
New Technologies  
Initiated by Management

## Thompson Products' Quality Control Solution to This Major Problem

**PROGRAM:** An efficient application of statistical techniques to the control of quality in mass production, of a wide variety of complex aircraft, automotive and industrial parts that must meet the highest quality characteristics.

**RESULTS:** *Huge savings in cost of scrap and rework, with reductions running as high as 65% of previous defective-work ratios . . . thousands of inspection man-hours saved . . .*

**METHOD:** For the management executive who is unfamiliar with the statistical method of quality control in mass production, basic reading is suggested in the bibliography below.

In lay language it is a scientific technique for determining and controlling the multiple sources of production errors arising from the combined interaction of men, materials and machines. Physically, it is a system of control charts whose primary function is to give progressive guidance to machine operators during each phase of production in such a way that quality is controlled throughout the changing manufacturing process.

Successful application of the method at Thompson Products was the result of management strategy in reorganizing the operational set-up.

### *The Place of Quality Control in the Organization*

First, a Staff Industrial Engineering Department was created to promote good methods in all phases of production throughout all divisions. Statistics was recognized as a Staff function administered by a Staff Statistician (SS).

Second, a Statistical Quality Control Department was organized in each plant, under the supervision of a Quality Control Engineer (QCE).

Chief duties of the SS are to develop sound and workable applications of statistical methods for Thompson Products' process and quality control.

Chief duties of the QCE are to conduct statistical investigations on the basis of which proper sampling layouts, control chart techniques, and other statistical analyses are developed.

### *Strategy of the Training Program*

Key to efficient and economical administration of the program lies in continuous training of key people who are directly or indirectly connected with quality production and inspection. Over 200 key men have been trained in the Thompson plants employing 20,000 people.

Training is in two phases: Intensive course deals with larger aspects of statistical methods and inductive and deductive logic. Short course deals with its specific application to company production.

### *Management Policy*

Essential to any kind of quality control program is economic flexibility. Where scientific analysis reveals the need for equipment replacement, adequate working capital must be available for immediate action.

The basis of Thompson Products' success in the engineering of new developments — and producing them at high speed and low cost — is *their provision in advance of adequate working capital*, enabling them to continually employ the most economical and efficient methods and machines.

Modified versions of Thompson Products' program can be successfully applied to companies of all sizes.



Basic machine tools  
built by Jones &

Lamson are rated at the very top for efficiency in the control of manufacturing quality at high speeds. J & L engineers are regularly consulted by top production management in regard to cost-cutting programs.

**JONES & LAMSON**



MACHINE COMPANY  
Dept. 1710, Springfield, Vermont, U.S.A.

Turret Lathes — Fay Automatic Lathes — Thread Grinders  
Optical Comparators — Threading Dies

### **BIBLIOGRAPHY**

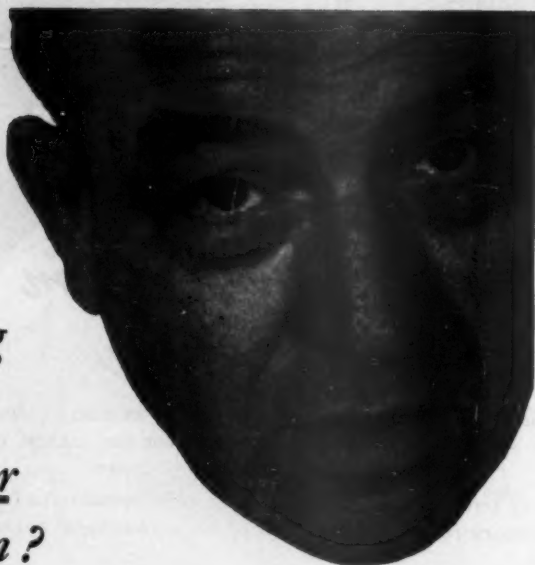
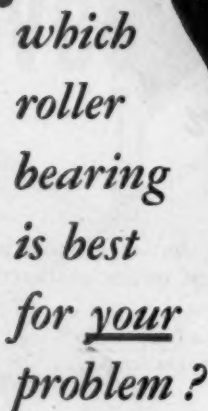
Basic: "Economic Control of Quality in Manufactured Products" — Walter A. Shewhart (Pub. D. Van Nostrand Co.)  
"Statistical Quality Control" — Eugene L. Grant (Pub. McGraw-Hill)  
"An Engineer's Manual of Statistical Methods" — Leslie Simon (Pub. John Wiley & Son)  
Technical Data: "Statistical Sampling Inspection in Aircraft Parts Industry" — October and November, 1951 issues of Tooling & Production — W. H. Coughlin: QCE (Thompson Products, Inc.)

"Quality Control by Statistical Methods Applied to Line Production" — September, 1946 issue of Industrial Quality Control.

"Quality Control as a Methods Improvement Function in Automotive & Aircraft Parts Manufacturing" — Quality Control Conference Papers, 1951, A. S. Q. C. — E. F. Giblin (Thompson Products, Inc.)

"How to Make Quality Control Work" — a special American Machinist report to metal working industries, April, 1951 —

"Thompson Training Program in Quality Control" — October, 1951 issue of Tooling & Production — J. V. Sirela (Staff Statistician, Thompson Products, Inc.)



**MULTIPLE**

**A Series**  
 McGill's A Series Rollers have an exclusive cone roller design that provides maximum load carrying capacity, a thermal stable space plus smooth, long-life performance. They also cannot exceed bearing size and cost.

**B Series**  
 McGill's B Series Rollers have an exclusive cone roller design that provides maximum load carrying capacity, a thermal stable space plus smooth, long-life performance. They also cannot exceed bearing size and cost.

**C Series**  
 McGill's C Series Rollers have an exclusive cone roller design that provides maximum load carrying capacity, a thermal stable space plus smooth, long-life performance. They also cannot exceed bearing size and cost.

**D Series**  
 McGill's D Series Rollers have an exclusive cone roller design that provides maximum load carrying capacity, a thermal stable space plus smooth, long-life performance. They also cannot exceed bearing size and cost.

*Rollers Roll More Load*

**McGILL**  
 precision bearings

• **Only Fair**—Goldberg advised the panel that the union was not seeking any change in wage policies. He did, however, assert that the steel workers were entitled to the same benefits of increased productivity as the 4¢ annual increase allowed by WSB to automobile workers. WSB cannot isolate the policy as applicable only to existing auto contracts, Goldberg said. WSB at present is considering a "productivity" wage increase policy.



## Your secretary is two people (when you soundwrite with AUDIOGRAPH)

It's important these days to squeeze more working time out of the working day. And GRAY AUDIOGRAPH accomplishes just that . . . it increases office output up to 30%.

AUDIOGRAPH lets your secretary do two jobs. She is free to act as your executive assistant. Yet because her time is better organized, she can slash

through mountains of paper work.

And you'll find you'll double your own capacity to get things done, too! You *soundwrite* conferences, memos, letters, any time. (At home, if you wish, because this compact AUDIOGRAPH is really portable.)

AUDIOGRAPH's exclusive features make soundwriting a simple pleasure.

To be specific: there's less bother because the disc holds a full hour's dictation. Single-lever control means no cumbersome adjustments. Monitor light lets you see your voice. (Important when you're recording telephone conversations.) But find out more! Send the coupon today.

*Gray*  
**AUDIOGRAPH**

### Features make it finest

The Gray Manufacturing Company,  
Hartford 1, Connecticut  
Send me Booklet Y-1—  
"Manpower—starts with YOU!"



AUDIOGRAPH sales and service in 100 U.S. cities. See your Classified Telephone Directory under "Dictating Machines." Canada: Northern Electric Company, Ltd. Abroad: Westrex Corporation (Western Electric Company export affiliate) in 35 countries.

TRADE MARK "AUDIOGRAPH" REG. U. S. PAT. OFF.



NAME \_\_\_\_\_

TITLE \_\_\_\_\_

FIRM \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_



## "Passing the Pepper"



**-10,000 Miles!**

The 15,000 tons of black pepper we use every year must travel half a world to get here—and that distance leaves plenty of chance for loss...

But protecting the value of pungent pepper the whole route of its long journey is no problem to the Marine Office of America! In this case, as with any other involving protection of goods in transit from this country to another, or from there to here, the Marine Office is able to offer precise protection applied skillfully, expertly—and soundly.

Whatever your commodity or ocean cargo insurance requirements, you'll get sound, efficient handling through the Marine Office of America.

**Ask Your Agent or Broker!**



**MARINE OFFICE OF AMERICA**

*Member Companies:*

- ★THE AMERICAN INSURANCE COMPANY
- ★AMERICAN EAGLE FIRE INSURANCE COMPANY
- ★THE CONTINENTAL INSURANCE COMPANY
- ★FIDELITY-PHENIX FIRE INSURANCE COMPANY
- ★FIREMEN'S INSURANCE COMPANY
- ★GLENS FALLS INSURANCE COMPANY
- ★THE HANOVER FIRE INSURANCE COMPANY

**MARINE  
OFFICE  
OF  
AMERICA**

116 John Street • New York 38, New York

Offices in Principal Cities

Claim-settling Agents Throughout the World

ALL CLASSES OF OCEAN AND INLAND MARINE INSURANCE

## Tide Turns on Textile Union

New England employers caught Textile Workers Union off guard with new demands for wage rate cuts. Companies blame ailing business, can see no real signs of relief.

For years unions haven't had to worry about serious efforts by employers to cut labor costs. Instead, because of general economic conditions, labor negotiators could concentrate on pushing contract terms up higher, year by year.

This week the tide turned—at least for one union, the Textile Workers Union of America (CIO). It got its first strong demands from employers for wage reductions. They came from woolen-worsted and cotton-rayon concerns in New England.

• The American Woolen Co., usually a pattern setter in its industry, notified TWUA that it is terminating its labor contracts when they run out. It wants new and more favorable terms.

• Associations representing cotton-rayon mills employing 95,000

workers advised TWUA that they want to negotiate a cut in wage rates in a March wage reopening.

• **Unexpected Turn**—The announcements took the union by surprise. Just the week before it had held wage conferences in New York. At both woolen-worsted and cotton-rayon meetings, TWUA's president, Emil Rieve, and other officers recommended that the union forego new wage demands in 1952. The two conferences accepted the recommendation.

• **Mind of Its Own**—The American Woolen contract covering 70,000 workers has a March 15 termination date. Unless either party serves a 60-day notice before that date, the pact is automatically renewed for another year.

TWUA thought that its decision to forego a wage demand would keep the



## Michigan Leaders Get Bad News on Auto Cuts

Gov. Mennen Williams of Michigan, Walter Reuther of CIO's United Auto Workers, Sen. Blair Moody of Michigan, and Charles Wilson of General Motors (above, left to right) got more glum news in Washington last week: New auto cutbacks, and rising unemployment, are in the offing.

On the basis of current production, one man may be laid off for every four cars taken from assembly lines. DPA is prepared

to allow production of 930,000 cars in the second quarter—off 70,000 from the first three months of 1952. But the actual output may be a lot less because new copper allocations will cover requirements for only 800,000 cars.

Efforts to get over this hump have put auto labor and management in a rare position—on the same side of the bargaining table.





# Chances are you have never tasted it!

If you're over 28, it's unlikely you've tasted canned baby foods.

For it was in 1924 that American Can Company developed its first miniature sanitary can for puréed baby foods.

This container, pioneered by *American Can Company*, opened up an entire new market for canners. This market today supplies the American public with millions of cans of baby food each year.

Here, then, is another demonstration of how Canco containers have affected our daily lives.

This pioneering of containers is just as much a part of Canco today as it ever was. Canco research scientists are constantly experimenting in an endless effort to produce even finer containers for a great variety of products.

Canco's reputation for being the most *versatile* man-

ufacturer in the container industry, comes in great measure from the success these pioneering efforts have enjoyed.

**As for the future**, Canco will continue to originate and develop containers to help people live better.



# YOU SAVE ERECTION TIME and MONEY

## with STEELCRAFT STEEL BUILDINGS

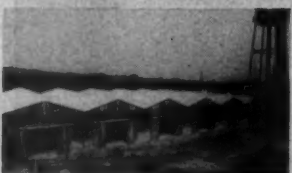
because STEELCRAFT does it all...



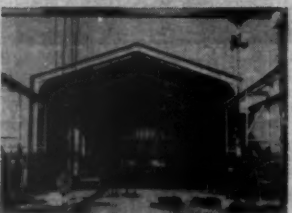
Textile Manufacturer



Precision Machining Operation



Storage Warehouse



Pipeline Equipment Fabricator

### Planning

For best results, call in Steelcraft during the early planning stage. That's when Steelcraft engineers can effect the greatest savings through the utilization of mass produced standardized building units resulting in savings in erection time and labor.

### Engineering

Working closely with the engineer, architect, contractor and owner, Steelcraft Engineers can recommend and incorporate standardized building units that will perform the necessary functions to meet the exact requirements of a particular building... the result is a definite savings on over-all construction costs.

### Supply

Steelcraft's fully integrated manufacturing operations with a continuous flow of standard parts and primary accessory items such as windows and doors, assure delivery of the complete building on time... from one source and with one responsibility.

... and Steelcraft Permanent Type Buildings meet all building codes... earn lowest insurance rates... qualify for maximum loans. Steelcraft Buildings are not to be confused with temporary prefabs. They are permanent structures designed to meet the exact requirements of any particular plant. There is no limit to the selection of collateral materials. Masonry walls may be used to match existing structures or galvanized ribbed, corrugated asbestos or aluminum panels may be specified. Steelcraft Buildings can be insulated when required.

Get the cost saving factors on a Steelcraft Building to solve your present and future space needs. Write now.



## STEELCRAFT

MANUFACTURING COMPANY  
EASTMAN, OHIO (IN GREATER CINCINNATI)

#### Mail Coupon today

STEELCRAFT MANUFACTURING CO., Dept. BW-132  
9017 Blue Ash Road, Rossmore, Ohio

- ☐ Send engineer to survey my building requirements.  
☐ Send me information on complete line of Steelcraft Metal Buildings.

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Business Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

present pact in effect until March, 1953. But it reckoned without the company.

American Woolen told the union that present contracts with TWUA pose "a serious problem for the company and our employees." The reason, according to American Woolen's president, Francis White, is that principal competitors did not have to take on added labor costs in 1951.

• **Pace Setter**—Last year TWUA got a 12¢ hourly raise in negotiations with woolen-worsted companies, but the Wage Stabilization Board cut it to 9½¢. American Woolen also gave a c-of-l clause and additional fringe benefits.

One group of big mills with AFL contracts did not sign for 9½¢ hourly raises in 1951. Other competitive mills gave the full 9½¢ increase, but did not follow American Woolen's lead by adding a c-of-l clause and fringes. They are now able to operate with lower labor costs—and lower prices.

• **Part and Parcel**—That's only a part of American Woolen's reason for wanting a new contract, though. The company is putting a lot more stress on its demand for a change in the work-load clause in its TWUA contracts.

American Woolen has a work-load clause permitting changes in assignments, negotiated late in 1951. But the company doesn't think it goes far enough. So it wants to go into the matter again in bargaining.

• **Work Load Raise**—Last weekend TWUA moved to avert further contract reopenings by employers. It agreed to let Wyandotte Worsted Co. raise the work load in two mills from four to six looms, to "meet southern competition." The new load had been tested for six weeks, and Wyandotte employees had O.K.'d it.

In return, Wyandotte agreed not to ask for negotiations on a new contract when the present pact runs out March 15.

TWUA announced that similar agreements will be made with other New England mills.

American Woolen described the Wyandotte development as "very interesting." But there was no immediate indication that it would drop its demand for contract negotiations with the union.

No contract termination is involved in TWUA negotiations with cotton-rayon mills. A contract signed last year runs to March, 1953. The notice served by employers is under a March, 1952, wage reopening clause, which provides that if parties fail to agree on mutually satisfactory terms their dispute will be settled in binding arbitration. That's where the cotton-rayon appeal for a lower wage rate apparently is headed.



## "HAVE WE CONSIDERED EVERY ANGLE, GENTLEMEN?"

**L**ITTLE Billy's thoughtful attitude is one you'd do well to adopt when you're reviewing your workmen's compensation insurance. Why? Because the *service* you receive can affect not only the morale of your employees, but your own peace of mind.

Ask your friendly, capable Hardware Mutuals representative to explain the benefits of Hardware Mutuals service which more and more employers are enjoying each year.

You will be interested to know that *Hardware Mutuals rank among the leaders in promptness of paying claims to injured employees.* This promptness helps speed their recovery by relieving financial worry.

Many other advantages are grouped under Hardware Mutuals *policy back of the policy*®. It provides you with the services of our Loss Prevention Department in eliminating the *causes* of accidents... plus fast, friendly, nationwide, day-and-night service. And consider this, too—over \$100,000,000 in dividends has been returned to Hardware Mutuals policyholders to date.

Why not get complete information on Hardware Mutuals workmen's compensation insurance? All you need do is phone Western Union by number, ask for Operator 25, and say you want the name and address of your nearest Hardware Mutuals representative!



*Insurance for your AUTOMOBILE...HOME...BUSINESS*

# Hardware Mutuals.

*Stevens Point, Wisconsin • Offices Coast to Coast*

HARDWARE MUTUAL CASUALTY COMPANY • HARDWARE DEALERS MUTUAL FIRE INSURANCE COMPANY

# How Honeywell Customized Temperature Control Helps Provide Year-Round Comfort in

## Bonwit Teller's New Chicago Store

*Specially designed system easily handles control problems  
created by variety of room sizes, exposure, use and occupancy differences*

The main salon, pictured below, dramatically demonstrates the reason why the Chicago architectural firm of Shaw, Metz and Dolio specified Honeywell Customized Temperature Control when designing Bonwit Teller's impressive new store.

At the southern end of this spacious salon on the second floor, the striking ceiling-to-floor window is exposed to icy winds in winter—and the hot sun in summer. A separate thermostat in this area compensates for the problems created by these exposure and weather factors.

Other thermostats in other areas of the second floor, as indicated on the plan, are especially important in meeting the comfort demands of smaller-sized rooms. These have different use, occupancy and exposure problems.

Honeywell Customized Temperature Control easily meets these problems throughout the store. How it does so, on the second floor, is highlighted by the other interior views.

The heating plant and air conditioning were installed by William Adams Engineers, Inc., Chicago; ventilating by R. B. Heyward Co. Chicago; George A. Fuller Company, Chicago, was the general contractor.







**Stock rooms** offer a real opportunity for important savings — if a store is equipped with Honeywell Customized Temperature Control. Take the room where hats are stored, for instance. Because no patrons and few employees enter here, it's unnecessary to maintain as high temperatures in winter as in other parts of the store. In summer the reverse is true. This saves fuel in winter — and refrigerated air in summer.



**If the fitting rooms** were controlled by a thermostat located in the main salon, customers changing their clothes here would be uncomfortably cool much of the time. But Honeywell Customized Temperature Control — with a separate thermostat system in the fitting rooms — maintains the right degree of warmth all the time.



### **How Honeywell Customized Temperature Control can help your business**

Whether it's a store, office, school, garage — or any public building, there's a Honeywell Customized Temperature Control System to meet your heating and ventilating problems.

Once equipped with a Honeywell Customized Temperature Control System, you'll not only have the newest, finest equipment available. You'll have the right kind of controls to keep your employees, customers or tenants comfortable — and you'll save fuel besides.

So for full facts on Honeywell Customized Temperature Control call your local Honeywell office. There are 91 across the nation. Learn how this system can help your business. Or mail the coupon today.

**A separate thermostat** system provides customers who patronize the fur salon, pictured above, with the special degree of comfort they need. And so it goes throughout Bonwit Teller, Chicago. As Henry Auster, the store's manager, says: "Customers often remark at how comfortable the store is. That's good for business — because they tell their friends. And I've noticed that employees are pleased with our 'climate' too. It makes them happier — and more efficient."

MINNEAPOLIS-HONEYWELL

Dept. BW-1-30

Minneapolis 8, Minnesota

Gentlemen:

I'm interested in learning how your Customized Temperature Control Systems can help my business.

Name .....

Firm Name .....

Address .....

City ..... Zone ..... State .....

MINNEAPOLIS  
**Honeywell**



*First in Controls*

# WHERE'S THE FIRE?

There are danger spots in every building (yours, too!) where fire is most likely to strike. These spots can be guarded day and night by a Kidde Automatic Fire Extinguishing System.

At the first sign of flame the Kidde system releases carbon dioxide (CO<sub>2</sub>) which blankets the fire—literally smothers it instantly. You can protect several spaces with a single Kidde system...or have separate protection for such hazards as a dip tank or generator.

With a Kidde System, there is no water damage, no messy residue to ruin costly machinery, electrical equipment or documents. And that means no interruption in production. Find out more about Kidde Fire Protection today. Write to:

**Walter Kidde & Company, Inc.**  
125 Main Street, Belleville 9, N. J.

# Kidde

Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

*In the Paint Locker!*



*In the  
Power Plant!*



*In the  
Dip Tank!*



*In the  
Garage!*



## Wages in Sin . . .

. . . don't cost so much after all. First penalties by WSB only hit employers in income tax deductions.

Employers got an idea recently about how much they might be penalized for violating wage stabilization—provided they make a clean breast of the violation and bring their wages back into line without delay.

A quasi-judicial regional enforcement commission in Atlanta announced the first penalties imposed in the Wage Stabilization Board's new enforcement drive (BW-Dec.15'51,p30). They're not too stiff: disallowance of only the above-ceiling pay as a cost for income tax purposes.

• **Break for Employers**—That's a break for the employers. Under the Defense Production Act, the entire amount of wages paid during a stabilization violation could have been disallowed—not just the above-ceiling payments.

Moreover, the total amount could have been disallowed also as a labor cost to be used in figuring costs on government contracts. And, for aggravated cases, the employers could have been prosecuted by the Dept. of Justice.

Moral: The sooner employers straighten out minor or inadvertent violations, the less time they'll be violating the rules and the smaller the penalty will be.

• **Four Cases Decided**—Three of the Atlanta region violations were for exceeding the WSB's 10% "catch-up" formula. The other one was for bonus violations. No unions were involved in any of the four cases. The companies, violations, and penalties are:

**Commercial Bank, Panama City, Fla.**, gave 18 employees a 10% raise in October, 1950, and reported it as a "merit" increase—not to be charged against the 10% allowable under WSB rules. In July, 1951, it gave the 18 employees another 10% raise. WSB didn't agree that the first raise was a "merit" increase, said it actually exhausted the amount due under stabilization. Therefore, it ruled, the second 10% raise was a violation. The above-ceiling wages between July 1 and Nov. 1 (when the second raise was rescinded) amounted to \$1,625.04. The enforcement commission disallowed that amount in business costs for income tax purposes.

**Gray Knox Marble Co., Knoxville, Tenn.**, gave three 5¢-an-hour wage hikes to 83 quarry employees between May, 1950, and April, 1951. The last raise pierced the 10% ceiling. Total wages paid during the violation period

**Cessna**  
CASE HISTORY  
ADVERTISEMENT

## BUSINESS SPROUTS WINGS



PILOT-SALESMAN BRUCE WALSH, EXECUTIVES GRAY AND CADLE  
3 men in Cessnas do the work of 9



"STEAK 'N SHAKE" EXECUTIVE GUS BELT  
35 places at once

### THE BIG SQUEEZE

#### Some Firms Find the Answer

Today, in U. S. business, the manpower squeeze is on in earnest. Work loads are heavier. Good men are hard to keep—harder to find. But some firms have found one important answer . . .

### SALES

#### Baughman's "Air Force"

In Jerseyville, Ill., two shirt-sleeved top executives had reason to be happy. As early as 1948, Baughman Mfg. Co.'s Jim Cadle (production) and David Gray (sales) had found a way to sell the company's line of spreaders, conveyors and special truck bodies over a wide territory with a small sales force . . . a sales "air force" equipped with fast Cessna 170's!

The idea (credited to Cadle) was put into effect late in 1948 after tests conclusively proved that sales calls which ordinarily took four weeks could be made in one week in a Cessna.

**Weather's No Problem.** In 1949, with one Cessna, the company logged 1500 hours (roughly 150,000 miles) and, by keeping flight plans flexible, lost only 5 flying days because of weather.

Today, Baughman Co. has 3 salesmen flying Cessna 170's—three others learning to fly—and their own landing strip (1800 ft. x 100 ft.) right beside the plant.

Sales Manager Gray reports that operating costs on his Cessnas about equal those on company cars. Expense sheets for salesmen are about the same. "But," he says, "the men in a Cessna make 3 times as many calls. 170's are ideal for our operation," he adds, "fast—the best made for short or rough field landings—and low enough in original cost and upkeep to make a fleet practical."

**Other Uses.** Flying in prospective distributors for tours of home plant; picking up important customers at St. Louis' Lam-

bert Field and landing them beside the Jerseyville plant 12 minutes later (the trip takes 2 hours by car); closing "hot deals" by taking prospects where they can see Baughman equipment in action.

### MANAGEMENT

#### Flying Restaurateur

When energetic Gus Belt's original "Steak 'n Shake" roadside restaurant in Bloomington, Ill., blossomed into a busy chain of 35 in 5 states, the big problem was to keep the close personal supervision which made the first "Steak 'n Shake" so successful.

Again the answer was a Cessna! Belt has logged 2500 hours, or about 400,000 miles, in two of them. He now flies a big, 4-5 place, fast Cessna 190 which puts him at all 35 branches in minimum time . . .

sampling foods, inspecting his kitchens, etc. He especially likes the time savings his Cessna gives him.

### YOUR BUSINESS

Now, let a Cessna prove its value to your firm. Charter a 170 or 195 before you buy. Fly it on every trip you make. Compare it with any transportation—in actual economy, in time you save, in new profits it alone makes possible.

Your local Cessna dealer will gladly make all arrangements. See him, today!

\* \* \*

For more information on Cessnas and more case histories on the use of Cessnas in businesses similar to yours, phone or see your local Cessna dealer. Or write CESSNA AIRCRAFT CO., Wichita, Kansas.



### BUILT TO MAKE BUSINESS A PLEASURE

New Super-Lift Wing Flaps shorten take-offs, landings. Patented Landing Gear cushions rough-field landings. High-Wing stability, visibility, sun protection. Smooth 6-cylinder, service-proved, 145 H.P. Continental Engine for comfortable, fast cruising. All-metal dependability. Adjustable foam-rubber seats (removable rear seat). Yard-wide doors. Big 120-lb. luggage capacity. Hydraulic brakes. Yet it's the lowest-priced 4-place, all-metal plane by several thousand dollars! ALSO SEE the 4-5 place, bigger, faster Cessna 190 series. There's a Cessna to fit your business!





## Life began at 55 for Al (-life at our expense!)

(Based on Hartford Claim 112916)

We're a retail clothier and haberdasher... with a good-size mail order business. Heading up this department, we had a man of 35 years service—an employee whom we trusted implicitly, of course. About three years ago, however, he developed an unsuspected taste for high life. And, with it, a system of "short-circuiting" our Billing and Cashier's Departments that enabled him to indulge this taste for three years with more than \$53,500 of *our* money. When we finally caught up to him, an unspent \$17,000 was salvaged. Our entire loss of \$53,500 was recovered by full payment to us of our \$50,000 Hartford Blanket Position Bond, plus \$3,500 of the salvaged money. We've learned that although most employees remain honest throughout their business lives, there's always the possibility that one will succumb to temptation. That's why we'll never be without an adequate Blanket Fidelity Bond.

Now about the chances of employee dishonesty in your own business...?

Just *don't* take 'em. Not today when rising taxes and rising prices make it so hard for people to get by, so easy to succumb to temptation!

Protect yourself with Hartford Blanket Fidelity coverage—"Dishon-

esty Insurance" at its efficient, economical best. Your Hartford agent or your insurance broker can give you full details. Call Western Union "Operator 25" for the name and address of your local Hartford Accident and Indemnity representative, or write us for a free descriptive booklet.

Year in and year out you'll do well with the

# Hartford



Hartford Fire Insurance Company • Hartford Accident and Indemnity Company  
Hartford Live Stock Insurance Company • Hartford 15, Connecticut

amounted to \$80,000, but the illegal excess was only \$5,200. The enforcement commission penalized the company only the \$5,200.

J. O. Goshorn Co., Memphis, manufacturer of plow handles and furniture parts, increased its fiscal-year bonus fund from \$4,699 paid in 1950 to \$6,980 paid last March. That's more than 10%, WSB said. Moreover, board enforcement officers said the firm failed to report bonuses of more than 25% paid to some individual employees. The enforcement commission penalized the company \$2,291—the total amount of the bonus increase.

M. P. Brothers, Nashville wholesale grocer, gave a 5% pay hike to 11 employees in June, 1951. WSB found wages had previously been raised the allowable 10%. So its enforcement officers cracked down on the new 5% raise and penalized the company \$1,449—the amount of the above-ceiling pay.

The biggest enforcement cases so far, involving two Washington, D. C., building contractors charged with above-ceiling rates, were heard in Detroit last month. The regional enforcement commission still hasn't decided the cases.

## LABOR BRIEFS

Citrus workers in Florida are being organized by CIO's Brewery Workers in the stepped-up "Operation Dixie" (BW-Dec. 8 '51, p38). The union says they are in its jurisdiction because canning and packaging citrus juice is "similar to beer canning." AFL is also after the 125,000 workers involved—25,000 in groves and the others in packing sheds and canning plants.

A 10% increase in pensions and retirement annuities will be sought by railroad workers during this session of Congress. The lawmakers amended the Railroad Retirement Act last November to up benefits by 15%. Railroad unions say that wasn't enough.

WSB jurisdiction over wages of seamen in foreign commerce is challenged by the National Maritime Union (CIO). It wants a federal court to set aside a board ruling that cut an 8% pay hike negotiated with 84 shipping companies to an "allowable" 6.2%.

Rail union shop, legalized last year and spreading over the carriers, is being tested in federal court action by a group of Louisville & Nashville employees. They argue that the 1951 amendment to the Railway Labor Act was unconstitutional. Suit is against





High fashion  
or high explosive...

Atlas chemicals  
work for both



Used as basic ingredients in the production of high explosives and blasting caps for pipeline and highway construction, quarrying and mining, Atlas chemicals also work for those who make textiles . . . for those who clean them. The dazzling fabrics that high fashion experts use—and commonplace materials, too—are made with the help of Atlas surface active agents and other textile chemicals . . . are kept bright and clean by Atlas detergents.

Textile chemical "assistants," made by Atlas, speed production of both natural and synthetic fibres . . . improve fabric quality.

Activated carbons and detergents produced by Atlas help dry cleaners do a better job. Commercial laundries use these detergents to wash whites whiter . . . colors brighter. And Atlas ironer

covers give flatwork a smooth, fresh finish.

Atlas chemicals are many and diverse . . .  
useful chemical products which serve  
the world's needs.



**ATLAS**

**POWDER COMPANY**  
WILMINGTON 99, DELAWARE

Offices in Principal Cities

Industrial Explosives • Industrial Finishes  
Laundry Covers • Acids • Activated Carbons  
Hexahydric Alcohols • Surface Active Agents

Send for the booklet "Products of Atlas." You may find that Atlas has the answer to a process or product improvement for you.

*first* in the world  
and *first* the world over



## Hypressure *Jenny* Steam Cleaners

For Every Mill, Mine, Factory, Farm and Automotive Need

**FIRST** choice in thousands of plants, shops and factories all over the world because Jenny steam cleaning removes oil, dirt and grease from machinery and equipment *10 times faster* than by hand methods . . . sanitizes . . . disinfects . . . saves man-hours . . . increases profits!

**FIRST** in performance, because Hypressure Jenny, the world's first steam cleaner, is the product of three generations of inventive skill, and 25 years of progress in steam cleaner design and manufacture.

**FIRST** with the widest choice of models, sizes and types of steam cleaners, which means that you will get the *right* one for your needs.

**FIRST**, and the only steam cleaner with a nationwide factory-trained service organization . . . an added guarantee of satisfaction for you.

Write for free booklet showing how Hypressure Jenny can save money and increase profits. No obligation.

### HYPRESSURE JENNY DIVISION

"World's Headquarters for Steam Cleaners"

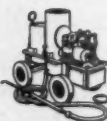
HO TESTEAD VALVE MANUFACTURING COMPANY

"Serving Since 1912"

P. O. BOX 304

CORAOPOUS, PA.

World's only combination  
Steam Cleaners and Cooling  
System Flushers.  
Above—"SERVICE MASTER"—  
45 gal. per hour  
Below—"MODEL 'JO'"—  
90 gal. per hour



"FARM MODEL"  
90 gal. per hour



"CHAMPION"  
180 gallons per hour



"SUPER-DUTY"  
300 gallons per hour



"ALL-ELECTRIC"  
60 gallons per hour



"FIRELESS"  
45 to 90 gallons per hour

L&N and the Brotherhood of Railway Clerks.

An isolated incident of antiunion conduct isn't enough by itself, to be considered an unfair labor practice. NLRB so ruled recently in clearing the American Thread Co. of charges brought by AFL's textile workers. The board said a question about an employee's attitude toward the union was illegal, but no penalty is justified: The incident is "unrelated to any other antiunion conduct."

Safety legislation will be sought in Congress this session by the United Mine Workers—which wants federal inspectors to have the right (now denied them) to close unsafe diggings. UMW was planning the drive even before the recent West Frankfort, Ill., mine disaster, which took 119 lives.

New wage demands drafted by the Communications Workers of America (CIO) call for a "reasonable" pay hike for 315,000 Bell System employees. Most of them got 10% raises last year.

Reed & Prince strike is now in its second year, still with no signs of progress toward a settlement (BW—Mar. 24 '51, p138). CIO's United Steelworkers reported last week that 750 of the original 900 strikers from the Worcester (Mass.) plant are now employed elsewhere. A congressional committee that probed the long impasse last August, to see how T-H was affected, is due to report early this session.

## Hormel Sets Pattern For Sickness Benefits

George A. Hormel & Co. blazed the trail for today's guaranteed-annual-wage demands when it put such a plan into effect in Austin, Minn., 17 years ago. Recently, the meat packer agreed to a liberalized sickness and accident benefits plan—and union leaders believe it may set a similar pattern for tomorrow's demands in that field.

The plan was negotiated with the United Packinghouse Workers (CIO), replaces one in effect since 1946. Under it, Hormel's 8,000 employees are assured of getting 70% of their normal weekly pay (based on 40 hours' work) for as long as 26 weeks if they can't work because of sickness or accident.

Actually, according to Hormel and its union, employees will be losing even less pay than the indicated 30%. Sickness and disability benefits aren't subject to income taxes, so disabled employees will really be drawing from 90% to 100% of their normal take-home base pay.



## America's greatest treasure hunt is now underway!

It's a hunt for scrap metal of all kinds desperately needed to keep production of everything for defense and civilian needs at peak levels. Some 9,000 steel salesmen working with local Chambers of Commerce Committees are calling personally on every business establishment where there is a possibility of locating metal not now being used. (For example:—a small button works scrapped 20 tons of obsolete machinery.) The businessman is then

requested to sell his old steel or iron or copper or aluminum to a local scrap dealer who will sort, prepare, and resell it to the mills and foundries. Help your local scrap representative when he calls, or if he has already called on you keep looking for scrap. Junk your worn-out and broken machines and equipment now! Then put in a call to your local scrap dealer!

**REMEMBER — STEEL IS 80% SCRAP!**



**JONES & LAUGHLIN STEEL CORPORATION**  
PITTSBURGH 30, PA.

**J&L  
STEEL**



## HEALTH



CASE HISTORY. Hilmer Larson, a meter repairman, is interviewed by clinic boss, Dr. H. K. Hellerstein, and an aide.

# Putting Heart Cases Back to Work

(Story starts on page 56)



TESTS of great thoroughness are made to establish capabilities of Larson, who had a heart attack months before.

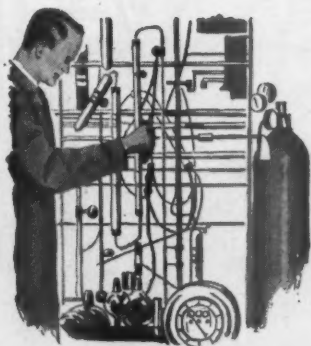


ROUND-TABLE SESSION collates findings of medical and job experts on Larson's case. Its conclusions will be turned over to Dr. Don Kelly (second from left), company doctor who referred the case. For what happened to Larson, see page 56.

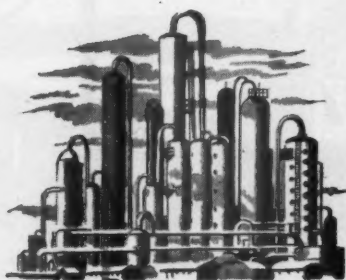


# The Celanese Chemical Program

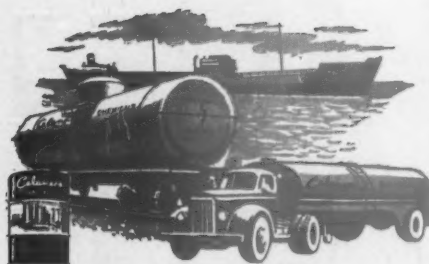
HAS YOUR BUSINESS GROWTH IN MIND



RESEARCH THAT ANTICIPATES  
INDUSTRIAL REQUIREMENTS



PRODUCTION BY OXIDATION OF  
SELECTED PETROLEUM HYDROCARBONS



COMPLETE SHIPPING SERVICE:  
TANKER, BARGE, TANK CAR, TANK TRUCK, DRUM

A comprehensive catalog, completely describing each of the products in the broad range of Celanese\* organic chemicals, has just been released. You are invited to write for your free copy. Address request on your company letterhead to:  
Celanese Corporation of America, Chemical Division,  
Dept. 518A, 180 Madison Avenue, New York 16.



TERMINALS AND DISTRIBUTION POINTS  
IN KEY LOCATIONS

## CHEMICALS BY CELANESE

Acetic Acid  
Acetone  
Butyl Alcohols  
Methanol  
n-Propanol

Acetaldehyde  
Formaldehyde  
Formaldehyde in Alcohols  
Paraformaldehyde  
Tricresyl Phosphates

Butylene Glycols  
Dipropylene Glycol  
Propylene Glycol  
Propylene Oxide  
Special Solvents



\*Reg. U. S. Pat. Off.



EXPANSION PROGRAM THAT  
LOOKS FORWARD TO YOUR GROWING NEEDS

# Your Hometown



*The Family Service magazine*

# is America

You could, if you didn't know the real people of this country, make out a pretty strong case that America is headed for a breakdown. But you would be wrong. Here at The American, you see, we serve these people in their own hometowns—in Fairfield, Conn., in San Diego, Cal., in Bangor, Me., in thousands of places where families still believe in themselves, their communities and America.

Pretend to be hardboiled about it, but, actually, aren't you glad America has so many people who still believe in each other? Because they do, they are more responsive to sound ideas than people who are ruled by cynicism. Give Hometown America an honest product and it will give you enduring patronage. These are the people who buy the products they know from the dealers they know. These are the people whose lasting custom has built the great brand names.

We know them because we are of them. For 76 years The American has served them. Thus it is known as the Family Service Magazine for Hometown America. Today, more than ever, we believe in these Hometown Americans, for in the dark clouds over America they are the silver lining—the hope of the nation.

They seek The American because it serves them. They trust it as it trusts them. They respond to it for they are, by nature, responsive, just as they are, by nature, responsible.

More than two and a half million of these trustworthy families—with 38.7% greater income than the average—read The American Magazine every month. So if you want responsible people to believe in the integrity of your company, its products or services, these are the people. If you tell them your story in The American Magazine they will read it and believe it. Whatever you do, don't worry about America. America is sound and good at its roots. And its roots grow deep—in Hometown, America.

*John W. McPherson*  
Publisher

THE **American**  
MAGAZINE

for

*Hometown America*

The Crowell-Collier Publishing Company, 640 Fifth Ave., New York 19, N. Y. Publishers of The American Magazine, Collier's, and Woman's Home Companion



from Laundry Presses  
to Sprinkler Systems



**Quincy**  
COMPRESSORS

**DO IT BETTER...FASTER  
AT LOWER COST**

Whether it's pressing a pleated skirt or providing air pressure for dry pipe fire sprinkler system installations... you can be sure it's being done right with Quincy Compressors. These are merely two of the hundreds of unique and everyday jobs performed by Quincy.

Quincy builds the most complete line of air compressors for service stations, garages or for use as part of products requiring compressed air supply. Sizes ranging from 1 to 90 c.f.m. Sold and serviced by a nationwide network of authorized automotive and industrial distributors.



Get New Book  
"AIR MAKES  
THINGS HUM"  
—illustrates  
and describes  
16 interesting  
compressed air  
applications.  
Write Dept. W-24.



**QUINCY COMPRESSOR CO.**  
QUINCY, ILLINOIS

Branch Offices: NEW YORK • PHILADELPHIA •  
CHICAGO • ST. LOUIS • DALLAS • SAN FRANCISCO  
Quincy Manufactures Air Compressors Exclusively

(Health starts on page 52)



**BACK AT WORK.** Larson resumes his old job at Thompson Products main plant, aided by a jalopy to ride around. Company figures it has invested \$12,000 in Larson's training.

## Cardiac Cases Return to Work

When heart disease hits a trained worker and then responds to treatment, both the man and his company have some tough decisions to make.

The recovering worker must decide whether to try to work again—or to resign himself to uselessness on a disability pension. What work can he do without endangering his life?

The employer must decide whether he wants the worker back, and in what job. He may have an investment of \$10,000 to \$12,000 in the training of the skilled operator; to lose his services entirely is wasteful, especially in a time of labor shortage. On the other hand, experience has shown that if the worker is rehired and aggravates his heart condition, the courts are likely to hold the company liable for maximum claims.

There is indecision all around. But the companies, at least, generally decide against rehiring the worker in any capacity.

• **Results**—In the last couple of years one serious effort has been launched

to straighten out all these problems at the same time. It is the Work Classification Clinic of the Cleveland Area Heart Society. On the first scattering returns, it's a huge success: 205 workers—80% of all clinic patients—have been returned to jobs, and not one of them has had to receive industrial compensation since.

What's more, the clinic's reports are accepted as gospel by family and plant doctors, management, unions, and the heart victims themselves.

• **Thorough**—Probable secret of the success is the thorough-going approach the clinic uses.

Most cardiac cases are referred to the clinic by family or plant doctors. First step is an extensive examination, done by the clinic's volunteer cardiologists. The tests include delving into the patient's medical history, fluoroscopic examinations of the chest, electrocardiograms and exercise-tolerance tests.

Armed with this dossier, a medical social worker interviews the patient to find out how well he understands his



# Behind the Plate

for the Champion  
N. Y. GIANTS...

or

# Behind his Desk

for  
FEDERAL  
BEARINGS...



## Wes Westrum Aims for Top Performance

From Spring's first "Play Ball" to the last out of the final World Series game, Wes Westrum is in there trying. And his all-time National League fielding record of .999 proves he had no peer in the job he set out to do. It's a record that can only be broken by absolute perfection.

When Wes hangs up his glove in the Fall, he brings the same errorless performance to his work at Federal Bearings. Wes has always aimed for the "perfect"

job. And in that sense, he is typical of all Federal employees, for precision and performance are as much by-words at Federal as they are on the baseball diamond.

Giant fans depend on Westrum for top performance. Bearing customers throughout industry have depended on Federal's bearings since 1916, and Federal has never failed them.

THE FEDERAL BEARINGS CO., INC., POUGHKEEPSIE, N. Y.



*An autographed photo of  
Wes Westrum is yours for the asking.*

## Federal BALL BEARINGS

ONE OF AMERICA'S  
LEADING BALL BEARING MANUFACTURERS



## The Boss never bragged like this before!

The first time you see a Steel Age Executive desk, you'll very likely say, "Now *that's* the desk for me!" For there—in one beautifully styled piece of fine office furniture—is an office companion that will carry you through a lifetime of busy work days with superb comfort and efficiency. Your Steel Age dealer may be able to deliver *yours* sooner than you think!

Corry-Jamestown Manufacturing Corp.  
Corry, Penna.



At Leading Office Furniture Dealers from Coast-to-Coast

### FRICK Refrigeration Serves Lucky Lager Brewing Co.

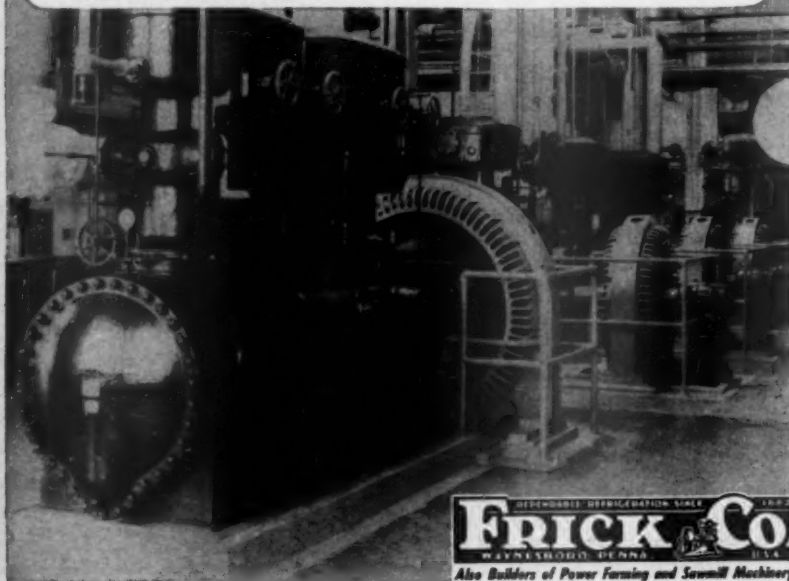
This Brewery in Los Angeles County, California, one of the finest in the country and one of three Lucky Lager Breweries on the Pacific Coast, uses four large Frick ammonia compressors with unusual reliability and economy in producing 700,000 barrels of beer annually.

Installation by Eckert Engineering Co., Frick Distributors at San Francisco.

For the answer to your air conditioning, quick-freezing, ice-making or refrigeration problems, look to

**FRICK COMPANY**

• **Waynesboro, Penna.**



**FRICK CO.**  
WAYNESBORO, PENNA. U.S.A.  
Also Builders of Power Farming and Sawmill Machinery

"... people too valuable to be lost to industry..."

PICTURES on pages 52 & 56

disease, and especially whether his fears and worries are actually aggravating his condition.

Finally, a vocational counselor steps in. The job expert checks the requirements of the patient's old job with his present ability to work. If the old job is too tough, the counselor suggests more suitable work, with advice on how to learn the new skills.

• **Discussion**—When all interviews and examinations are finished, the clinic holds a round-table discussion of the case. When a decision has been reached, it is reported to the doctor who originally sent in the case. From then on, it's entirely up to employer and worker.

The clinic got started in 1949, on a \$5,000 grant from Republic Steel. Since then, the Heart Society has picked up the tab. Last year cost ran to around \$5,000; the 1952 budget calls for \$6,140. All of the clinic's services are free. Dr. Herman K. Hellerstein, a youthful cardiologist, is boss of its modest quarters. Mostly, it confines its attentions to workers with 10 to 25 years' experience on a job, people too valuable to be lost to industry.

• **New Approach**—Of course, there's nothing new about organized efforts to rehabilitate heart cases or other handicapped workers. Plant doctors, especially, have long been active in the work. Generally, their efforts have been to find out what capacities the worker has lost.

Right there is where the Cleveland clinic brings in a new technique. It wants to know: What capacities does the worker still have, and who has an open job to fit the capabilities?

Along these lines, the clinic dovetails nicely with Thompson Products main plant, which operates one of the most up-to-date of the job classification systems now springing up around the country. Dr. Don Kelly, plant doctor for the big Cleveland maker of bolts and valves, is an enthusiastic backer of the clinic. He rates it as a top factor in his own program, which has put 212 heart cases to work with complete success. Plant doctors handle the milder cases, but the tough ones are referred to the clinic.

• **Success Story**—The clinic thinks its heart method is bound to spread. It points to the estimated 10-million heart cripples that the American Heart Assn. says are living in the United States today. It's going to save an awful lot of money—and heartache—if the maximum number of them can be put back to work.

## *Speed Nut* SAVINGS STORIES.

# Beseler "Throws Light"

## ON 50% TIME SAVINGS

**How the Charles Beseler Company, Newark, New Jersey, eliminated 84 fasteners and cut assembly time and cost in half on new opaque projector assembly**

It used to take 168 screws, nuts and washers to attach the cover panels to the base frame of the new Beseler opaque projector. That was before "U"-Type SPEED NUTS were tried. Now it takes only 84 screws and SPEED NUTS to do this job.

By making this switch, Beseler picked up a 5% material savings, reduced handling, stocking and ordering of parts and made a substantial 50% saving in assembly time.

"U"-Type self-retaining SPEED NUTS are pre-

assembled on the base frames of projectors — ready for simple attaching of panels as frames come down assembly line. Time required for this step was cut from 13 minutes to 6, and the production rate was increased to a new high.

There is no better time than now to take a close look at *your* fastening costs. Savings here often balance rising costs elsewhere. Your Tinnerman representative will supply helpful details. Call him in — and write now for your copy of Savings Stories, Vol. III. TINNEMAN PRODUCTS, INC., Dept. 12, Box 6688, Cleveland 1, Ohio. In Canada: Dominion Fasteners, Limited, Hamilton. In Great Britain, Simmonds Aerocessories, Limited, Treforest, Wales.



"U"-Type SPEED NUTS are shown on flange of frame — in screw-receiving position, ready for blind attachment of panels. No extra parts handling. Screws are easily inserted and driven from assembly side of projector.



# Lucky? ... The fair,

fast, friendly settlement of  
an employee's insurance  
claim by Employers  
Mutuals isn't a  
matter of luck.



It reflects his employer's  
good judgment in selecting this ma-  
ture insurance organization. Our claim  
men—like their teammates—are com-  
pany-trained to relieve our policyholder-  
owners of every possible detail and  
maintain our unchallenged reputation



as "good people to do  
business with."



## EMPLOYERS MUTUALS of WAUSAU

Home Office: Wausau, Wisconsin

Offices in principal cities... Consult your telephone directory

Employers Mutuals write: Workmen's Compensation-Public Liability-Automobile-Group  
Health and Accident-Burglary-Plate Glass-Fidelity Bonds-and other casualty insurance.  
Fire-Extended Coverage-Inland Marine-and allied lines. All policies are nonassessable.



EMPLOYERS MUTUAL LIABILITY INSURANCE COMPANY OF WISCONSIN  
EMPLOYERS MUTUAL FIRE INSURANCE COMPANY

## READERS REPORT

### Bigger Than You Think

Dear Sirs:

Under the caption *The Lenders*, which appears in the article "Finance—How Tough Is It for Small Business?" [BW—Dec. 29 '51, p80] you state:

"What lenders were most important? As you might expect, commercial banks did the lion's share of the financing. . . . Small-loan companies (which in OBE's terminology includes finance companies) also were a source. These, along with loans from friends and relatives, were usually considered a last resort."

The last two sentences above are not only inaccurate, but are unfair to commercial finance companies. As a matter of fact, a number of small and medium-sized concerns have been doing business with commercial finance companies and factors for many years. The fact that the gigantic textile industry is financed to a very large extent by factors and commercial finance companies is proof that such financing is far from "last resort" financing.

WILLIAM J. DRAKE

EXECUTIVE SECRETARY  
NATIONAL CONFERENCE OF COMMERCIAL RECEIVABLE COMPANIES, INC.  
NEW YORK CITY

• BUSINESS WEEK feels its reporting was accurate as the article was based on the November issue of the Survey of Current Business put out by the Commerce Dept. Both the classification of finance companies as small loan companies and the terminology "last resort" were Commerce's.

### More Than You Think

Sirs:

In your article "Big Year for Construction in 1952" [BW—Dec. 22 '51, p54] you say: "Other types of public construction—notably . . . schools . . . are likely to run at a lower level in 1952."

Recently, John B. Veach, president of the National Lumber Mfrs. Assoc. issued a statement saying "there is no valid reason for holding up or putting off the building of vitally needed schools."

In the past several years, one-story wood frame schools have become increasingly popular. This . . . provides a prompt, economical and permanent solution to the pressing problem of providing necessary school buildings.

DOUGLAS S. STEINBERG

NATIONAL LUMBER MFRS. ASSOC.  
WASHINGTON, D. C.





## ALL SET FOR SAFEKEEPING

( HOW ABOUT THE ESSENTIAL RECORDS OF YOUR BUSINESS? )

Here are five kinds of business records—the contents of 15 file drawers—reduced, by Burroughs Microfilming, to five rolls of film you could hold in one hand. Yet the records are complete, each document filed exactly as you want it. And any part of the story is available for reference at a moment's notice.

Think what a system such as this can mean to you in terms of safety, convenience, and savings of time,

money and space! Thousands of documents can be recorded on one roll of microfilm in as little as half an hour. And the cost of this security is low.

You can find out all about it by picking up your telephone and calling your Burroughs representative. He knows business needs and can give you the facts about the finest microfilming equipment available. Burroughs Adding Machine Company, Detroit 32, Michigan.

WHEREVER THERE'S BUSINESS THERE'S

# Burroughs



*Don't risk it...  
Microfilm it!*



**FREE**

a valuable booklet of information—"Safe-guarding Vital Records." Write today for your copy.



Modern microfilm equipment built by Bell & Howell, and sold by Burroughs, is the finest obtainable. It reflects Bell & Howell's acknowledged leadership in the field of precision instruments for fine photography.



## *Both* MANAGEMENT and WORKERS *will be* *Happy in* OKLAHOMA


Before you decide on your new location — see what Oklahoma offers!



- ... the climate is mild. People like living in Oklahoma and soon call it "home." We have clean cities, fine schools, good fishing and vacation spots.
- ... we have a way of doing business and getting along with people that promotes harmonious industrial relations.
- ... there's a wide choice of locations in large or small towns.
- ... abundant natural resources and transportation.
- ... and there's plenty of dependable, low-cost electric power, fuel oil, natural gas, coal and water.

There's a lot more to the Oklahoma story, so it will be to your advantage to write us for further information. There's no obligation. We'll welcome your inquiry. Write: Public Service Company of Oklahoma, General Offices: Tulsa, Oklahoma.

**PUBLIC SERVICE COMPANY**  
OF OKLAHOMA

AS YOUNG AND AS OLD AS THE  STATE OF OKLAHOMA

EVERYTHING IS *O.K.* IN OKLAHOMA!

## LAW

### \$10-Million Plum

**It'll be ready for picking by an Ohio foundation when the courts decide tax claims against it.**

Government departments have used up two of their four downs in their long scrimmage against the L. A. Beeghly Foundation, an educational and religious trust, of Youngstown, Ohio. This week the foundation was waiting for the government to get its third play rolling. It's been an eight-year battle so far, first over patents, later over a court-impounded \$10-million royalty fund that neither side has yet had more than a smell of.

Another strange element of the case: The patents on which the royalties were collected—the Steckel process for cold-rolling strip steel—expired more than four years ago. The \$10-million royalty fund makes up the entire resources of the foundation. And it's growing at the rate of about \$1,650 a day, drawing 6% interest from the government as long as the litigation continues.

• **Steckel Patents**—The Beeghly Foundation inherited the patent interests and the royalties back in 1945, when Abram P. Steckel's Cold Metal Process Co. suddenly dissolved. The company had had a stormy career as owner and licensor of the Steckel patents.

Steckel, Howard S. Lamb, Leon A. Beeghly, and other Youngstown men formed Cold Metal Process Co. to patent and promote the Steckel process. Patents were issued in 1930, seven years after the first application. Then came the problem of collecting royalties from the steel companies that used the process. Of the 20 or so licenses, more than half decided to put up a court fight.

In 1940 Cold Metal won a \$4-million cash settlement from U. S. Steel, and other companies defending patent infringement suits began to swing into line. Some suits are still pending to this day, however.

Cold Metal was so prosperous in the early '40s that, one year, it paid \$750 dividends on a share of stock that had been peddled at \$50. But the clouds were gathering. In 1943 the Justice Dept. filed a civil fraud suit against the company, claiming misrepresentation in gaining the patents. Royalty money was then impounded by a federal court.

• **Sudden Death**—On a Saturday, Dec. 29, 1945, stockholders of Cold Metal

# Only STEEL can do so many jobs so well

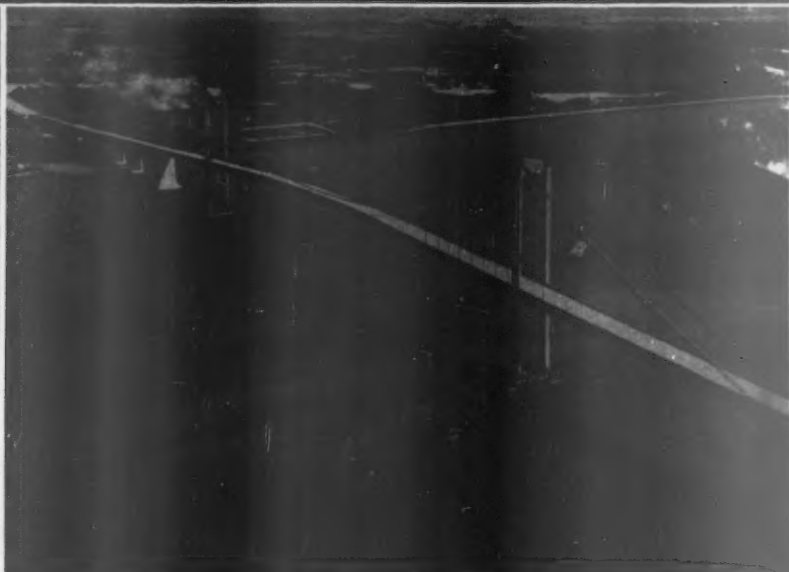


**EASY WAY UP FOR A FAST TRIP DOWN.** Skiers at Sun Valley find this "chairway" designed and built by U.S. Steel, a big help in mounting the world famous ski slopes of this popular Idaho resort. U.S. Steel's Tramway Division can design and build you anything from passenger tramways to freight tramways for transporting sand, gravel, coal, lumber, ore, limestone and many other materials.



**THE SINEWS OF DEFENSE** are mostly steel, whether weapons, or steel mats, or the steel strapping that binds boxes of supplies. United States Steel has followed an uninterrupted program of expansion so that it can produce ever-greater quantities of steel to help safeguard America's security.

Liston is... The Theatre Guild on the Air, presented every Sunday evening by United States Steel. National Broadcasting Company, coast-to-coast network. Consult your newspaper for time and station.



**NEW DELAWARE MEMORIAL BRIDGE**, linking southern New Jersey and Delaware, will have an estimated traffic of 5 million vehicles a year. The bridge proper, with a total length of 10,765½ feet, contains the world's sixth largest suspension span, with a center span of 2150 feet. U.S. Steel products used include the structural steel, U-S-S AMERICAN High Tensile Wire for the huge cables, U-S-S TIGER BRAND Wire Rope and Universal Atlas Cement. The giant structure was fabricated and erected by United States Steel.

**STORY-BOOK DRAGON?** No, this is a continuous miner, built to be highly maneuverable in a cramped, underground coal mine. With cutting bits mounted on electrically powered chains... it rips the coal from the seam face... and then conveys it automatically into transportation equipment for removal above ground. One of the wonders of modern invention, this powerful machine is made of tough, enduring steel. Only steel can do so many jobs so well.

**FACTS YOU SHOULD KNOW ABOUT STEEL** In the United States, there are 253 steel companies; 375 iron and steel plants. The payroll of the iron and steel industry in 1950 amounted to \$2,390,000,000, and its approximate total investment to \$6,750,000,000. The industry employs 635,000 people, exclusive of non-steel jobs, and has 650,000 stockholders.



This trade-mark is your guide to quality steel

## UNITED STATES STEEL *Helping to Build a Better America*

AMERICAN BRIDGE...AMERICAN STEEL & WIRE and CYCLONE FENCE...COLUMBIA-GENEVA STEEL...CONSOLIDATED WESTERN STEEL...GERRARD STEEL STRAPPING...NATIONAL TUBE OIL WELL SUPPLY...TENNESSEE COAL & IRON...UNITED STATES STEEL PRODUCTS...UNITED STATES STEEL SUPPLY...Divisions of UNITED STATES STEEL COMPANY, PITTSBURGH  
GUNNISON HOMES, INC. • UNION SUPPLY COMPANY • UNITED STATES STEEL EXPORT COMPANY • UNIVERSAL ATLAS CEMENT COMPANY

## STOP

paying a premium in time, space and labor on production, receiving, shipping and transportation costs.



## START

saving on every lifting, moving and storage operation through mechanized materials handling.

## STOP

excessive and expensive "time out of service" caused by mechanical failures.



## START

buying YALE... the Gas Truck engineered for continuous all-out performance.



**YALE GAS TRUCKS** deliver more continuous all-out service; more time on the job and out of the repair shop; more work done and handling and storage costs saved. There's a powerful YALE Gas Truck with a rated capacity to do every materials handling job better. For full details on the YALE Gas Truck that can fill your needs best, fill out and mail the coupon below.

### THESE EXCLUSIVE FEATURES HELP YALE LICK "DOWN-TIME"

—the big cost factor  
in gas truck operation

- Smooth, clutch-saving Fluid Drive
- Powerful, smooth-running 65 HP Engine
- Fully-enclosed, over-capacity, smooth meshing, Hypoid Gears

## YALE & TOWNE

YALE is a registered trade mark of  
The Yale & Towne Manufacturing Co.

MAIL THIS COUPON TODAY

The Yale & Towne Manufacturing Co., Dept. 141  
Philadelphia 15, Pa.

Please send me your free new detailed bulletin, THE YALE GAS TRUCK

COMPANY \_\_\_\_\_

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

In Canada write: The Yale & Towne Mfg. Co., St. Catharines, Ont.

YALE GAS AND ELECTRIC TRUCKS • YALE WORKSAVERS  
YALE HAND TRUCKS • YALE HAND AND ELECTRIC HOISTS

"... The way \$9-million was shifted to a taxfree foundation stirred up the tax collectors..."

LAW starts on p. 62

held a hasty meeting and voted to dissolve the corporation as of that day. By that time, all the stock was in the hand of the Beeghly Foundation, which had paid \$11-million for it. With dissolution of the company, the patents and other assets reverted to the Beeghly Foundation.

By prerrearrangement with a Columbus attorney, papers of dissolution of Cold Metal Process Co. were filed at the Secretary of State's office the same day—public offices were normally closed at noon on Saturday. And a few hours later six steel companies deposited about \$9-million in royalty settlements.

Since the corporation was now out of existence, the \$9-million was placed with the court registry for later determination of ownership, presumably now in the hands of the foundation. It is this fund that has grown past the \$10-million mark.

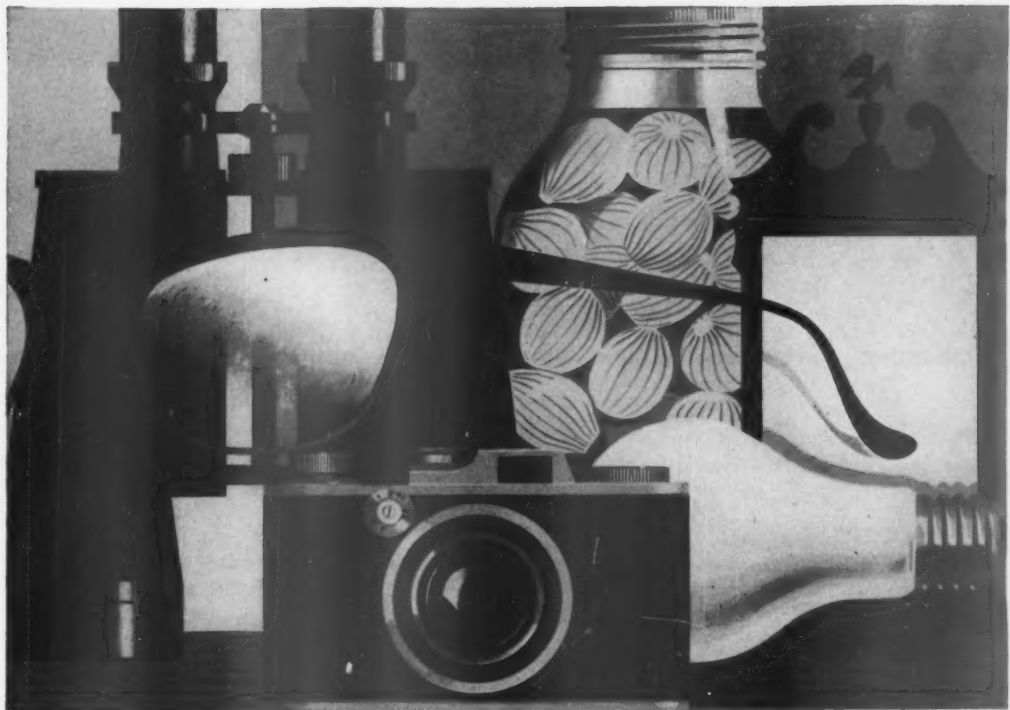
• **Tax Collectors Aroused**—The succession of events shifting the \$9-million from the taxable corporation to the taxfree foundation stirred up the tax collectors. The Bureau of Internal Revenue started a suit for 1945 taxes. Last month Judge Arnold Raum of Massachusetts, sitting in the federal court of tax appeals in Cleveland, threw out the government's claim on the ground that Cold Metal didn't receive the money that year.

The next step is the Treasury Dept.'s suit for 1949 taxes on the fund. After that, there'll probably be another suit for taxes on the interest the fund has been earning all these years.

• **Patent Upheld**—Meanwhile, the civil fraud suit on the patents had gone all the way to the Supreme Court (BW—May 29 '48, p. 26), with the patent holders victorious. That clears the way, after the tax suits are settled, for the Beeghly Foundation to collect not only the impounded fund, but also the royalties tied up in several patent infringement suits that are still on court calendars. How the foundation would use the money is not known.

• **New Company**—While Cold Metal Process Co. is defunct, many of the same men that guided it in its prime are active in another company—the Cold Metal Products Co. The new company, not related to the Beeghly Foundation, has patented a new cold-rolled steel strip process and is making the rolling mills. It's now in process of expanding from its present Youngstown plant to a new 40-acre site at Indianapolis.





## The chemical that helps you see!

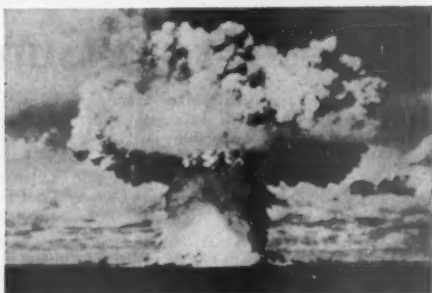
Can you imagine living in a world without glass? You'd have no windows or mirrors in your home. No light bulbs. No camera or television. No eyeglasses.

Modern glass is made largely from sand and soda ash. Because Wyandotte Soda Ash is consistently uniform and remarkably free from the metallic impurities that may discolor glass, the glass industry orders a giant share of our production.

Wyandotte Soda Ash strikingly illustrates the essential role of chemicals in industry and in the preparedness program. It helps extract uranium and aluminum from their ores. It makes lenses for military instruments.

In our national production, it is required for many processes in the chemical, pulp and paper, textile and dye industries. It is also used in Wyandotte G.L.X. — which makes glass and metal equipment spotless in the hardest water — and in other cleaning products.

If you have a perplexing chemical or cleaning problem, a discussion with us may save you time, money and labor.



*The low boron content of Wyandotte Soda Ash helps vital uranium production — to keep the U. S. ahead on stockpiled atomic bombs.*



**Wyandotte**  
REG. U. S. PAT. OFF.

**CHEMICALS**  
WYANDOTTE, MICHIGAN  
OFFICES IN PRINCIPAL CITIES

- ORGANICS
- INORGANICS
- SPECIALIZED CLEANING PRODUCTS

# COMMODITIES

## EVERYBODY WANTS PHENOL

**1** You can make it like this with **CHLORINE**:

Take **CHLORINE** + Add **Benzene** → You get **Monochlorobenzene** + Add **Caustic Soda** → You get **PHENOL** (plus a salt)

**2** You can also make it like this, with **SULFUR** (in acid form)

Take **SULFURic acid** + Add **Benzene** → You get **Benzene sulfonate** + Add **Caustic Soda** → You get **PHENOL** (plus Sodium Sulfite)

**BUT** CHLORINE AND SULFUR ARE SHORT, SO...

**3** Hercules will now make **PHENOL** like this

Take **Benzene** + Add **Propylene** → You get **Cumene** + Add **Air** → You get **Cumene hydroperoxide** → Introduce a catalyst → You get **PHENOL** (plus acetone)

## Hercules—From Gunpowder to Phenol

Hercules Powder Co. this week announced a new venture that will do a lot to widen its already comfortable place in the chemical industry. It will build a new \$8-million plant, it said, to produce phenol by a process it has discovered.

• **Essential Chemical**—Phenol is a chemical so vital to the defense effort that NPA rates the over-all phenol program near the top of its essential list. Up to now phenol could be made only by using either sulfur or chlorine, both among the tightest commodities of all. Hercules can make it without using either.

Hercules says that its new plant will also be able to make paracresol and acetone, also two vital chemicals. In fact, the same plant can produce all

three chemicals at once in equal quantities, or produce more of one than the other if necessary. Probably, it will produce more phenol for the moment, since that is in the shortest supply.

• **Uses**—Phenol finds its biggest use in synthetic resins for phenolic plastics, is also important in the manufacture of varnishes, enamels, and pharmaceuticals. Paracresol goes into such things as insulating compounds, electrical panel boards, and dyes. Acetone is a versatile and important industrial solvent and chemical intermediate. (A side product of the new process is cymene alcohols, widely used in flotation and as wetting agents.)

All this is a brand-new field of chemistry for Hercules. But ventures into unknown territory have marked

the history of Hercules during its nearly 40 years of existence. It started out in 1913 in an extremely narrow field—making explosives. That year it chalked up \$7-million in sales. By last year experimentation and diversification had made it one of the top U.S. chemical companies. From its headquarters in Wilmington, Del., it operates 25 plants throughout the U.S. Sales have risen to 30 times those in its first year—to an estimated \$215-million in 1951.

### I. The Broadening Road

Hercules could hardly have started out as a commercial explosives company in a better year than 1913. (It was an offshoot of du Pont, following



# Mobilized interiors solve your layout problems today and tomorrow

... this Book of Facts shows you how



● No matter how perfectly your layout meets *present* needs, it will be truly efficient only if it can be quickly, easily and economically adapted to *changes* in space requirements. Such changes are inevitable—and they occur far sooner and much more frequently than is generally realized.

Mills Movable Metal Walls, for over thirty years the demonstrably superior system of flexible interiors, are today's efficient answer to this problem. Attractively modern in design and finish, of all-welded steel construction, they are structurally strong, completely incombustible, fully insulated and thoroughly soundproofed. Yet they are easily installed and can be quickly moved to fit new layouts—frequently in a matter of only a few hours—at very low cost.

**THE MILLS COMPANY, 963 WAYSIDE ROAD, CLEVELAND 10, OHIO**



## A PRACTICAL BOOK for BUSINESS EXECUTIVES

We'll be glad to send you a free copy of this 48-page book. Just ask for Mills Movable Metal Walls Catalog No. 52.

**MILLS**

*Movable*

**METAL WALLS**



... You'll also find this catalog in Sweet's File, Architectural, for 1952.

from  
aircraft engines  
to  
field rations . . .

*Military supplies travel safely in Milprint packages*



**Milprint's complete military packaging service**

Packaging in all sizes — from 2" x 2" pouches to giant engine barriers... printed or plain... large or small quantities.

ARMY



NAVY



AIR  
FORCE



**1. Food Stuffs**

Materials to meet all government purchasing requirements for soluble and insoluble foods . . . facilities to handle the complete packaging job, including printed identification.

**2. Quartermaster Rations**

Materials and packages to fit every QM specification for hand or machine wrapping.

**3. Engines and Large Assemblies**

All types of CLASS "A" moisture and vapor-proof barriers to specifications: JAN-P-131, MIL-E-6050, AN-B-20, MIL-B-131A.

**4. Spare Parts Radio, Radar and Electronic Equipment Medical Supplies**

Greaseproof, waterproof, moisture vapor-proof bags and pouches to specifications: Class A & B to JAN-P-131, AN-B-20, MIL-C-6056, MIL-B-131A. Class abcd Type I & II to JAN-P-117 Grade A JAN-B-121, Type I and II.



Printed Cellulose, Milfilm, Polyethylene, Acetate, Glassine, Foils, Folding Cartons, Bags, Lithographed Displays, Printed Promotional Material.

**Milprint** INC.

General Offices: Milwaukee, Wis.  
Sales Offices in Principal Cities

Bridging the gap of time and distance between production lines and international danger zones is an important task in girding the Free World for defense. Milprint packaging plays a key role in this vital work. Backed by an enviable civilian packaging record, Milprint combines the broadest range of technical resources and human skill . . . to produce packaging that fulfills every military requirement. Call your Milprint man TODAY!

**Milprint Follow-thru**

If you supply defense agencies, Milprint Follow-Thru Service can help you all the way! Milprint produces instruction manuals, including dramatic Trans-Vision; maps; catalogs; charts; everything that's printed.





an antitrust decree.) Almost immediately, it got into large-scale production of military explosives for the Allies.

The end of the war left Hercules with little or no market for its smokeless powder. But the stalemate didn't last long: Hercules put its nitrocellulose capacity to work manufacturing supplies for producers of photographic film, plastics, and lacquers.

• **Naval Stores**—But this still left a pretty narrow field of operation. In 1919 Hercules formed an industrial research department to find out where it might go into new chemical fields. Within a year the company was in the business of producing naval stores. (Naval stores are turpentine, rosin, and pine oil; they get the name from the fact that for centuries their main use was for caulking ships.)

Hercules venture into this field was pioneering from two standpoints: (1) It marked a radical departure from its previous chemical experience; and (2) the method of producing naval stores that Hercules adapted was practically unknown at the time. Up to then, the method used to get naval stores had been to tap the longleaf southern pine trees for their gum. Hercules entered the field by taking the naval stores from the wood itself.

• **Advantages**—This process has several advantages over the gum method. For one thing, it made use of the otherwise worthless stumps of the longleaf southern pine. For another, the long taproot of the stump turned out to be a wealthy storehouse of chemicals of all kinds.

To do this new job, Hercules built a steam-distillation plant at Hattiesburg, Miss., in 1920. Almost at once it became a leading producer of naval stores and other chemicals from this source, and has been so ever since.

• **A Step Forward**—Now, says Hercules, it makes a host of derivatives that overshadow in importance the original trio that once were the whole of its naval stores production. The main derivatives are terpene and rosin chemicals—used in insecticides, textiles, paints, varnishes, lacquers, paper, mining, metal, rubber, and many other products and processes.

It was this kind of broadening development that led Hercules to its latest venture—the new process to make phenol without using either chlorine or sulfur.

It discovered that if it added oxygen to some of the hydrocarbon byproducts of its naval stores operation, the result was a product of the pine-oil type. And such a product had a wide market in the flotation process used to separate minerals from ores. This development aroused Hercules' interest in the potentialities of oxidation processes along other lines. That interest—and continued research—was what led to its de-



and **READY FOR**  
**1 MAN TO DO THE**  
**WORK OF 3!**



"UP-RIGHT"

SCAFFOLD-  
ON-WHEELS

Here's how to reduce  
your overhead  
maintenance and  
installation costs...

One man can erect a tower of  
any height desired in minutes!  
Aluminum alloy scaffold sec-  
tions are unfolded and set one  
on top of the other. Scaffold  
rolls down aisles... straddles  
machinery.

WRITE FOR  
DESCRIPTIVE CIRCULAR

• **"UP-RIGHT" SCAFFOLDS** DEPT. 144 • 1013 PARDEE ST. • BERKELEY, CALIF. •

Factories  
BERKELEY, CALIF. &  
TETERBORO, N. J.

Name

Company

Address

Offices in all principal cities City  State



**"WHY DON'T YOU TALK TO THE PEOPLE AT CHASE?"**

"Chase is made to order for *your* sort of a problem. They have a special Transportation Department that handles all types of banking problems in the transportation industry.

"They were one of the first banks in the country to have such a department and today they are one of the few banks offering this specialized service on a national scale.

"The men in this department are not only thoroughly experienced bankers, but are also experts in the field of transportation. They can offer you the most complete service of any bank . . . including

special loan plans for expansion or replacement of equipment . . . plus an objective analysis of the financial needs of your business.

"What's more, when you work with the people at Chase, their experts are at your disposal at all times helping to improve your operation . . . contributing ideas that can save you money.

"With such a complete service, and with such large resources and wealth of experience, Chase is the ideal bank for every transportation operation with a banking problem. **WHY DON'T YOU TALK TO THE PEOPLE AT CHASE?"**

(Advertisement)



The following day I did talk to Chase

Much of my equipment, primarily engines, had become so obsolete it was unprofitable to use. I was having trouble handling our normal load to say nothing of the added freight resulting from our defense efforts. I needed new diesels, and I needed them fast.

Chase handled my problem quickly, courteously and efficiently.

First of all, they looked over my entire operation. They analyzed the area I was serving and determined what business I might expect during a given period. They estimated the cash return that might be expected on the investment. On the basis of these facts and figures, they then provided me with a loan that would solve my problem, and yet not burden the business to a point that might prove detrimental. It was one of the soundest operations I've ever witnessed.

In addition, Chase specialists, out of their broad experience with large railroads in the field, showed me a number of ways in which I could improve my operation.

Of course, this is good business for them too. The sounder my operation is, the safer their loan.

Throughout the entire program, Chase men gave me direct personal service, saving much valuable time. And in working with Chase, I became aware of how many large transportation outfits Chase works with... how many people in the field they know personally... just how much "It pays to do business with Chase."

Chase has men trained and experienced to expertly handle the financial problems of every industry. Why not write, call or come in.

**It pays to do business with Chase**

THE  
**CHASE**  
NATIONAL BANK  
OF THE CITY OF NEW YORK  
[MEMBER FEDERAL DEPOSIT INSURANCE CORP.]

velopment of the new phenol process.

But Hercules discovered that process almost too late. When it filed its patent applications, it learned that Distillers Co., Ltd., working independently in England, had developed the same process. Hercules moved fast, acquired the U.S. patents and patent applications of Distillers. Then B. A. Shawinigan, Ltd., was licensed to use the process. Shawinigan will build a phenol and acetone plant in Montreal to supply the Canadian market.

• **Nearby Sources**—Hercules' own plant will go up on the Delaware River, near Wilmington, because it will be able to get both propylene and benzene from petroleum refineries or coke ovens in the area. Terpenes, raw materials for the new process, will come from the Hercules naval-stores operations.

## II. A Guiding Hand

No one man can claim credit for Hercules' expansion from a narrow field into the broad spectrum of chemistry. But

the guiding hand behind it has been that of Charles A. Higgins, 63, president of the company since 1939 and chairman of its board since 1944. British born, Higgins joined the company in 1915 as an explosives chemist. After World War I he was one of the large corps of skilled chemists and chemical engineers who worked on the developments that led the company into diversified chemical manufacturing.

• **The Quiet Life**—Higgins doesn't like the limelight, lives quietly with his wife on a farm 15 miles from Wilmington. His main interest is in his prize Guernsey cattle. But he spends a lot of time on the job, particularly visiting the company's 25 plants. For these visits, Higgins uses one of Hercules' two DC-3s.

Higgins is particularly pleased with the new phenol process. He says: "It follows a Hercules policy of sticking close to profit-producing fields of endeavor until research has the time to forge strong links with new raw materials and wider markets."

# Stainless Supply Eases Up

U. S. Steel, with unexpected surplus of chrome stainless, tries to sell it to industrial builders. Salesmen say that, long-range, it's cheap and easy to maintain.

U.S. Steel is driving hard on a new market-development program—and the product seeking a market is, of all things, stainless steel. It's no "when-we-can-serve-you-manana" push, either; Big Steel wants to move the stainless right now. That's a pretty startling reversal for a time when demand for stainless was expected to hit a peak.

Civilian cutbacks have been the biggest factor in giving many stainless producers some capacity to sell. Big Steel, at least, has been telling the customers about it through ads in building and construction papers. The ads emphasize that stainless is "available now" for "current projects." The competition is selling hard, too, U.S. Steel salesmen admit.

• **No Nickel**—What they're all selling, to be sure, isn't the "18-and-8" grade of chromium-nickel stainless that has been the trade's most popular item for years. You can't buy that today except for highly rated defense programs. There isn't even very much of it being made; nickel is entirely too scarce and too vital for other alloys.

Actually, the stainless that's being peddled today is an improved descendant of the first type of stainless ever known—a straight chromium type. No one, least of all the steelmakers, argues that this is the same plush item as 18-and-8. It's harder to work, fabri-

cators know less about handling it. But Pittsburgh is full of steel men who argue that it is a pretty smart buy.

• **Skyscrapers**—Perhaps their most persuasive arguments for 17% chrome stainless—Type 430 is its American Iron & Steel Institute designation—are the three stainless-clad skyscrapers—the first of a planned eight—that Equitable Life Assurance Society is erecting at the foot of Pittsburgh's Golden Triangle. Five steelmakers—Allegheny-Ludlum, Armco, Crucible, Republic, and U.S. Steel—supplied the 250 tons of sheets that make up the skin of Equitable's \$70-million investment.

The trade says nobody, least of all a life insurance company, would sink that kind of money on a material about which he had any doubts.

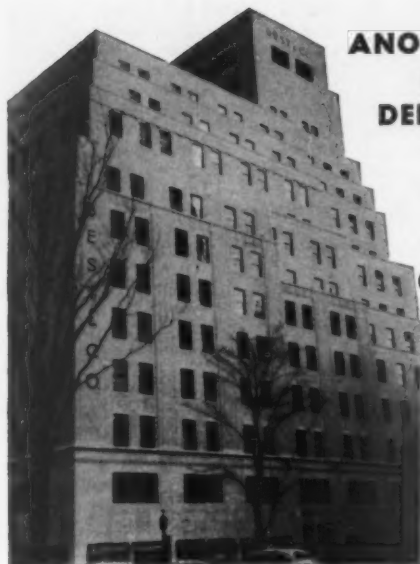
• **For Industry**—Skyscrapers aren't the main target of the selling efforts, though. The object is to sell stainless for covering powerplants, hangars, boiler shops, and industrial structure of all kinds. That type of job can be sure of a DPA allocation.

Here's what the steel people claim for chrome stainless.

• On a cost-per-year basis, it's cheaper than masonry, black steel, or galvanized sheathing.

• It costs less—in trouble and money—to maintain than any of these.

• It's easier and cheaper to erect



## ANOTHER FAMOUS BUILDING DEPENDING ON *"Buffalo"* AIR CONDITIONING EQUIPMENT

Best & Co.

Architect—  
Shreve, Lamb &  
Harmon, NYC

Heating, Ventilating & Air  
Conditioning—

Engineer:  
Edward E. Ashley, N.Y.C.

Contractor:  
Alvord & Swift, N.Y.C.

A FINE example of modern commercial America is the outstanding 5th Avenue, New York, store of Best & Co., world-famous apparel store. The forward-looking management of this store overlooked no detail in planning for the comfort of customers and employees. Small wonder "Buffalo" Fans and Air Conditioning Units were chosen—their reputation for long life, dependable and economical service has been proven for many years.

And comfort is just ONE of the important jobs being done by "Buffalo" Air Equipment! Its value in defense, for instance, was established in many ways during World War II. Let us show you how many of your problems can be solved or controlled by "Buffalo" Air Equipment!

Left, "Buffalo" Limit-Load Fan, most recommended for large ventilation jobs. Write for Bulletin 3737.

Middle, "Buffalo" Type "H" Humidifier nearing completion. Note sturdy galvanized steel casing.

Right, New "Buffalo" VPC Cabinet, a complete, central air conditioning unit. Note compact filter section.



## BUFFALO FORGE COMPANY

458 BROADWAY BUFFALO, NEW YORK  
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.  
Branch Offices in All Principal Cities

VENTILATING AIR WASHING AIR TEMPERING INDUCED DRAFT EXHAUSTING  
FORCED DRAFT COOLING HEATING PRESSURE BLOWING

than masonry or even heavier-gauge black or galvanized steel roofs and sidings.

• Its resistance to corrosion allows it to be used just about anywhere.

Only in private will stainless salesmen compare Type 430 with two other competitors—vitreous enameled steel panels and aluminum. For one thing, all but one of the stainless producers also make steel for vitreous enamel panels. For another, no one knows what aluminum and steel building panels can do in competition with each other.

• Competition—They haven't competed because, heretofore, neither aluminum nor stainless could compete with masonry, or black steel, or galvanized. That's no longer necessarily true. Here's what U.S. steel says about Type 430 and a companion type, 12% straight stainless:

Either aluminum or stainless will pay for itself "shortly after the first replacement of carbon steel (black or galvanized) in industrial atmospheres."

Final costs after 40 years find supergalvanized hitting 130% of chrome stainless, black steel reaching 150%. That includes a compound interest offset for the higher capital cost charged against stainless.

Labor costs provide the basis for such claims—labor for construction, reconstruction, maintenance, painting, and bricklaying.

• First Cost—Even on the basis of first cost, some startling claims are made. Using the cost of conventional masonry as the index value 100, you get these comparisons, based on recent Pittsburgh bid prices:

Type 430 stainless varies from 132 against masonry's low bid to 123 against the high bid. Aluminum ranges from 98 to 100; supergalvanized is 90; galvanized varies from 67 to 96.

All these figures are based on masonry costs for the first 20 ft. of height. As walls get higher, the edge for other materials becomes greater.

Some steel men get quite lyrical about chrome stainless, but others doubt that it will get the play when and if 18-and-8 comes back on the market. They cite these differences:

• Type 430 is somewhat more difficult to work, has a tendency to wrinkle in some tempers, is harder to polish. On the other hand its lower tensile strength and lesser work-hardening can be an advantage.

• Fabricators have had more experience with 18-and-8.

The industry is trying to bridge these gaps. One steelmaker says: "Everybody's trying to develop a stainless that will exceed 18-and-8 without using any nickel at all. We've come so close it's amazing—with 21% chrome and titanium."





The men who handle the "mikes" and other more precise measuring instruments in our plants all have one very important idea in common: to hold strong and steady a standard of craftsmanship which has stood for a great many years.

To help them, they have every needed item of modern production and control equipment, of course. But the very root and essence of high quality in a product is still the desire of a man to make it that way—and that's your main reason for the long-standing reliability of Columbia and Summerill products.

W&O 393C



**Columbia** STEEL & SHAFTING COMPANY

SUMMERILL TUBING COMPANY DIVISION  
PITTSBURGH 30, PENNSYLVANIA

*SPECIALIZING IN COLD FINISHED STEEL BARS and SEAMLESS STEEL TUBING*

## PRODUCTION



### OLD WAY

of applying cutting oils floods the tool and workpiece but doesn't cool or lubricate much at point of machining



### NEW WAY

pinpoints oil jet where tool meets workpiece, lowers heat and friction considerably

## How to Double a Tool's Output

Every now and then you see a new gimmick that prompts you to say: "It's so ridiculously simple, why didn't I think of it?" You kick yourself and wonder how many millions of dollars the inventor will net on his gadget.

That's how production men felt this week in Detroit, at the annual meeting of the Society of Automotive Engineers. The gimmick is a new cooling method for machining operations; it promises

to double, possibly quadruple the productivity of machine tools.

• **Thin Jet**—The process came from the Gulf Research & Development Co., the invention of Gulf's engineering division director, R. J. S. Pigott. It's different from conventional cooling in two ways:

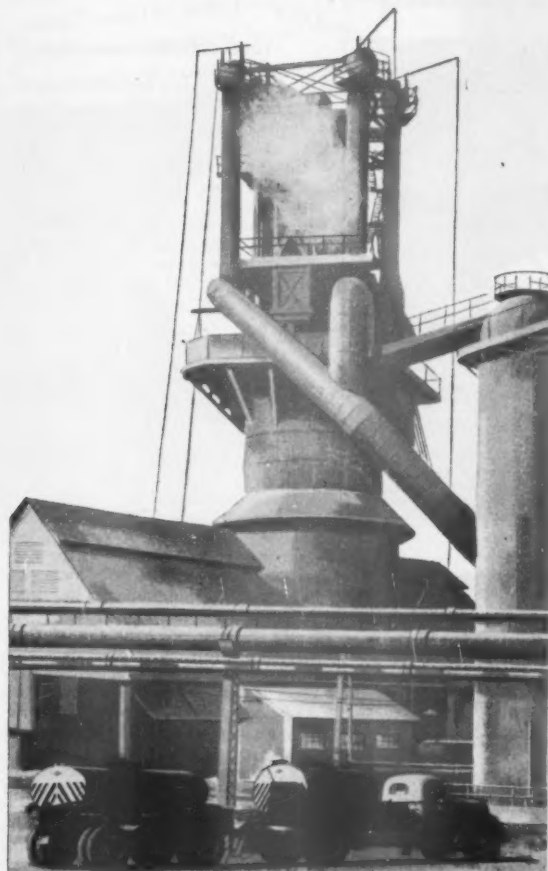
(1) The work piece is no longer inundated with cutting oil; instead a jet about half the thickness of the lead

in a pencil is squirted at the machining point. (2) The squirt comes from below the cutting tool instead of from overhead.

Gulf's new method, called Hi-Jet, offers gains that are timely in the light of troublesome machine tool shortages:

- It makes possible cutting speeds three to four times faster than conventional ones without curtailing tool life.
- At existing cutting speeds, tool

*here's a way to Increase Production ...*



**STEEL MILLS use Dowell Service, too!**

Steel plant had three gas washers badly clogged. One was taken out of service and cleaned mechanically, a procedure that took three days and 768 man hours. Dowell cleaned the other two simultaneously in just four hours, without interrupting washing operations!

**Other Steel Plant Equipment cleaned by Dowell Service**  
Furnace cooling systems, stoves, gas cycle equipment, coke plant equipment, pipe lines, cooling jackets, steam generating equipment, condensers, heat exchangers, gas mains, water seals, water wells.

# Dowell

## SERVICE

### FOR MAINTENANCE CLEANING OF POWER AND PROCESSING EQUIPMENT

**Excessive downtime for maintenance cleaning ...** whether scheduled or not ... cuts production. Days, even hours, *saved* in maintenance time increase plant capacity. That's why more and more plants of all kinds call Dowell. *Dowell Service has sliced their downtime—increased production!*

**Equipment cleaned faster!** No more time-consuming scaffolding and dismantling! Dowell Service uses liquid solvents to remove efficiency-stealing deposits from power and processing equipment—boilers, exchangers, condensers, water lines, towers. Vital production equipment has been put back in use in a few hours.

**Equipment cleaned cleaner!** Special solvents reach many out-of-the-way places often missed with mechanical cleaning. Many plants have found that because Dowell Service cleaned cleaner, maintenance periods have been less frequent and unexpected equipment failures fewer.

To management men responsible for peak production, Dowell Service offers skilled engineering aid in troublesome cleaning problems.

Dowell furnishes all necessary trained personnel, chemicals, pumps and control equipment. Call your local Dowell office for free estimate. Or write direct to Tulsa for a fact-filled descriptive leaflet.

**90 strategically located offices**  
ready to serve all industry with

- Maintenance cleaning service for industrial heat exchange equipment.
- Chemical services for oil, gas, and water wells.

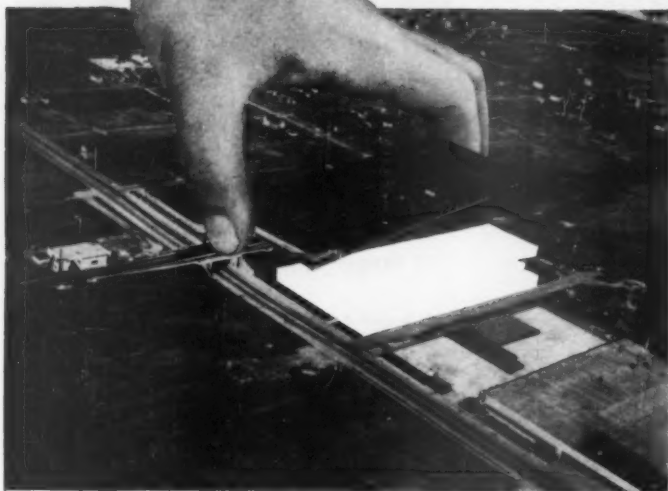
**DOWELL**

A Service Subsidiary of  
THE DOW CHEMICAL COMPANY

**Dowell Incorporated**

Tulsa 1, Oklahoma

## Place Your Plant Where There's Everything—



## PLUS Room to Grow!

AMONG the great assets of the country in meeting the problems of the guns and butter economy are the industrial facilities of the Chicago and Northern Illinois area.

Industrial growth in the Chicago area during recent years, measured in dollars, has exceeded that of any other comparable area in the United States.

Add to its natural advantages, the tremendous resources that this area has developed for itself—transportation, marketing, research, education, fine cultural and living facilities—and you have reasons why the Chicago and Northern Illinois area has come to be the greatest industrial center of the United States.

**A LETTER TO US . . .** describing your requirements will bring you a careful analysis of this area's advantages as they apply to your business. Or if you wish, we will send you a carefully screened list of the available buildings or sites that would be suitable for your operations, based on the information you give us.

*We keep all such inquiries confidential. Just write us.*

**Industries in the Chicago area have these outstanding advantages:** Railroad Center of the United States • World Airport • Inland Waterways • Geographical Center of U. S. Population • Great Financial Center • The "Great Central Market" • Food Producing and Processing Center • Leader in Iron and Steel Manufacturing • Good Labor Relations Record • 2,950,000 Kilowatts of Power • Tremendous Coal Reserves • Good Government • Good Living • Good Services for Local Tax Dollars.

**TERRITORIAL INFORMATION DEPARTMENT**  
Marquette Building—140 South Dearborn Street, Chicago 3, Illinois

**COMMONWEALTH EDISON COMPANY**  
**PUBLIC SERVICE COMPANY OF NORTHERN ILLINOIS**

*"...it pinpoints just enough just where it does the most good . . ."*

**TOOL COOLING** begins on p. 74

life will be extended three to 12 times. That means less down time on machines to replace tools and less tool sharpening. In fact, with the new cooling system, high-speed steel cutting tools can last as long as the more expensive carbide tools.

- One machining step can suffice on many jobs instead of a roughing operation followed by a finishing cut. That's because the new method produces smoother machined surface finishes.

- It takes about one-twentieth the amount of coolant needed before. Instead of flooding oil all over the work, it pinpoints just enough just where it does the most good.

- Tough-to-machine metals like titanium and stainless steel succumb more easily to cutting tools with the new cooling treatment.

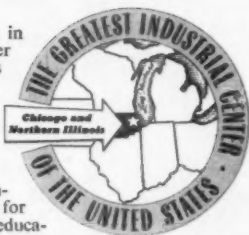
- **Splash Method**—All this is made possible by changing the way of applying the cutting oil or coolant on the work piece and cutting tool. For years now the metal cutting industry has stuck to one way of cooling the tool. The liquid is splashed onto the chip or metal shaving being cut off by the tool. But the chip, which is above the tool, keeps the coolant from the spot where it is most needed—the point of contact between the tool and the work piece (picture, page 74).

That means that the heat generated at the critical surface isn't properly quenched. Yet the need for quenching is the reason a liquid is used in the first place. And the surface of the tool over which the chip slides doesn't get much lubrication either. From this friction comes more heat buildup.

The heat is ruinous to the tool. And it welds tiny metal slivers to the tool, so that the cutter begins to machine rougher surfaces and soon has to be replaced and resharpened.

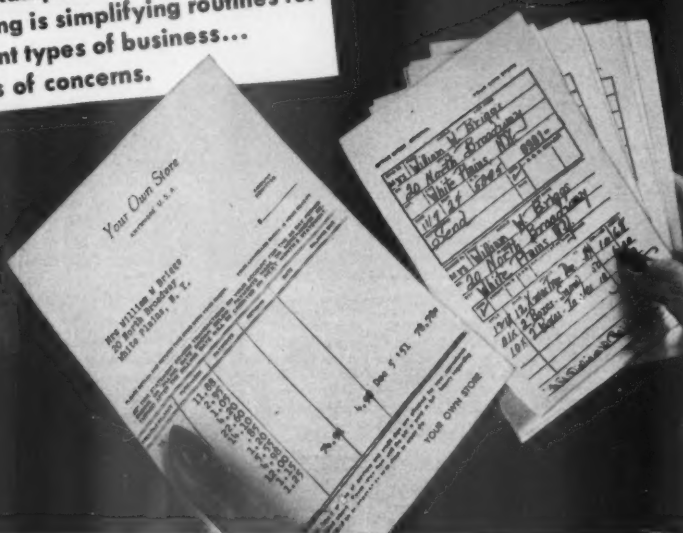
- **Longer Life**—Gulf's Hi-Jet gives the cutting tool a new lease on life. First, the jet nozzle shoots the oil right at the point of machining contact. And it does so at a pressure of about 400 psi. so that the oil can penetrate. Some of the oil vaporizes, sneaks past the cutting line, and condenses on the cutting tool aft of the cutting edge. It gives the sliding chip an oil film to glide over and thus holds down friction.

Careful tests by Gulf have not only proved that these benefits are available, but also backed them up with evidence as to why they come about. Measure-





Another example of the way Recordak microfilming is simplifying routines for 65 different types of business... thousands of concerns.



## Weeks of Xmas purchases recalled without question

**Question after question, adjustment after adjustment used to be the rule** each month when retail stores billed their "charge" customers under the month-end descriptive system. January, of course, was worst of all.

The trouble was directly traceable to the type of bill—an abbreviated description of each article purchased... with the respective price—but no supporting evidence. Many customers couldn't recall purchases... many weren't sure of prices... and adjustment departments buzzed with activity.

Today, the customer's questions are being answered in advance by all stores using the Recordak Photographic Billing System. And the burden was lifted this easily: the store simply photographs the original sales checks in its Recordak Microfilmer and forwards them to the customer along with the bill, which merely lists the sales check totals. Thus, the customer sees

who bought what... when... and where the merchandise was sent. Everything there—in complete detail authorized by signature.

At the same time the store's accounts receivable costs are greatly reduced: its billing clerks no longer describe individual purchases or list individual prices... can, therefore, handle many more accounts, more accurately—with billing machine requirements cut as much as 75%.

Get the full story on Recordak microfilming. Remember—65 different types of business... thousands of concerns... are using it to copy documents instantaneously... for a fraction of a cent apiece... and to simplify routines which may well be similar to yours. Recordak Corporation (Subsidiary of Eastman Kodak Company), 444 Madison Avenue, New York 22, N. Y.

"Recordak" is a trade-mark



# RECORDAK

(Subsidiary of Eastman Kodak Company)

originator of modern microfilming—and its application to business systems

# 5 WAYS TO RECOGNIZE A GOOD EXECUTIVE



No two top-notch administrators look alike... dress alike... work alike. But when you see a man who fits a certain pattern, the chances are you're looking at a good executive. Here are some ways to spot him:

1. He likes to use other men's heads as well as his own...
2. Gets a kick out of accomplishment...
3. He knows how to pass the ball to his subordinates...

4. He keeps several pots boiling at once without confusion...
5. Has an office that helps him do all these things better...

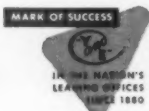
"Y and E" equipment does two things for an executive: 1. Gives him an office that looks attractive. 2. An office that makes it easier to be efficient. Both are important—one helps him sell himself and his ideas; the other helps him get things done.

"Y and E" offices are designed for success.



**YAWMAN AND FRBE MFG. CO.**

1006 JAY STREET • ROCHESTER 3, N. Y., U. S. A.



THE YAWMAN & FRBE  
LEARNING OFFICES  
SINCE 1880

Clean and White...

## Eastern's Atlantic Bond

Crisp as a January night! That's Atlantic Bond, the paper that makes your letterheads look better — your office forms perform better.

Containing Eastern's *Purocell*® pulp, Atlantic Bond is made in a brilliant tru-white, cream and in twelve business-tested colors. So, next time, specify "Atlantic" — the outstanding business paper that is genuinely watermarked with this symbol of quality.

EASTERN CORPORATION • BANGOR • MAINE

"... he noticed that the work piece surface looked bone dry and shiny..."

TOOL COOLING begins on p. 74

ments showed that the force needed to feed the cutting tool into the work piece was reduced by some 33% with jet cooling. Cutting edge temperatures dropped from 900F to 800F.

Pigott says you can see that more heat is being taken away because much more vapor forms, which means more of the oil is being boiled off. To keep the smoke from bothering the operator, Pigott came up with a neat contraption that shoots a circular curtain of oil from above and below the machining point. This oil shield both contains and dissolves the vapor.

• **License**—Thompson Products, Inc., of Cleveland, has also been working with Hi-Jet and will build the equipment under Gulf license. Thompson found it was running behind schedule in machining valves of Inconel (a tough, highly resistant steel) for plane engines. It just didn't have enough machines. By switching to jet cooling, the company not only caught up with its production timetable, but was able to take several machines off the line for other work. Cutting tool life went up 25 to 30 times.

Others installing Hi-Jet are Carnegie-Illinois, Westinghouse, Warner & Swasey, International Harvester, and Cadillac's Cleveland tank plant.

• **Equipment and Oil**—The Hi-Jet package is a two-part deal—the equipment and a special cutting oil. Gulf says the equipment—consisting of the jet nozzles, flexible tubing, and a pump—will cost about 3% of the price of the machine tool. For a \$10,000 lathe, a Hi-Jet installation will run about \$300.

By midyear the equipment will be ready for distribution. The installation will have to be geared to your particular machine tool, the type of metal you are cutting, the machining speeds used, and the type of cutting tool.

• **Lubricant**—The Hi-Jet cutting oil compounded by Gulf is said to be a triple-purpose lubricant. It is especially suited to machining, can be used to lubricate the machine tool itself, and serves as a hydraulic fluid for actuating machine controls.

Inventor Pigott, currently president of the American Society of Mechanical Engineers, says he accidentally stumbled onto the cooling idea. In checking some machining tests in the Gulf research shops, he noticed that the work piece surface looked bone dry and shiny as it came away from the cutting tool. That got him thinking that maybe



**Your trucking job different? (Of course it is!)**



**Take your loads and roads, for instance.** Naturally they're different. Your loads may be big or little, heavy or light, bulky or compact. Your roads may be paved or rough, level or hilly. So your truck must fit your particular trucking job. And there's a Dodge "Job-Rated" truck that does just that!

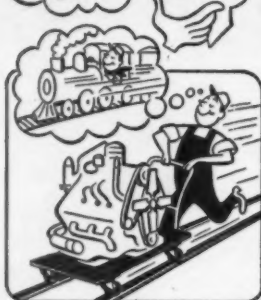


**No matter what loads you haul, you'll carry them surely and safely in a Dodge "Job-Rated" truck.** Its load-carrying units (frame, axles and springs, for example) will have the strength and capacity your loads demand. You'll haul bigger payloads. Your truck will perform better and last longer.



**No matter what roads you travel, you'll move your loads quickly and economically in a truck that's a "Job-Rated" for your job.** Every load-moving unit (such as engine, clutch and transmission) will stand up under severe operating conditions. See your Dodge dealer about a truck that fits your job.

**DODGE "Job-Rated" TRUCKS**



## The right track to faster materials-handling!

It's Bassick Grooved-Wheel Casters on angle iron track... for moving heavy loads frequently in the same direction.

It's the fast, flexible assembly line technique that helped make the aircraft industry a record-breaking producer. Saves labor, floor space, floor wear. Easily, economically installed.

Bassick Casters, the industry leaders, for everything that moves, are available through selected industrial distributors.

**Du Mont cuts  
"Reducible 30%"  
on Grooved-  
Wheels!**



Du Mont equips costly high-vacuum tube pumping units with Bassick Grooved-Wheel Casters—runs them on angle iron track through oven to process TV tubes. Result: Du Mont reduces "Reducible 30%"... materials-handling costs (about 30% of total cost), one of today's few reducible expenses. THE BASSICK COMPANY, Bridgeport 2, Conn. In Canada: Belleville, Ontario.



# Bassick

MAKING WHEELS KINDS OF CASTERS. MAKING CASTERS DO MORE.



the flood of cutting oil wasn't getting to the right place at all. So he reversed the arrangement and tried cooling from below instead of from above. Eventually, he came up with Hi-Jet.

When Pigott showed his development to Charles Kettering, the dean of

automotive engineers, and asked him why in 75 years nobody ever thought of doing it, Kettering came up with a classic reply. "It's the obscurity of the obvious," said Boss Ket. "And that's why observation is one of the keys to invention."

## Stuck for Copper Substitute

Auto makers don't see much chance of stretching their next allotment of copper for more than 800,000 cars, may not be able to use the larger steel quota NPA gave them.

Last week the National Production Authority threw a challenge at Detroit. Said NPA to the car makers: You can have enough steel in the second quarter for 900,000 cars, but enough copper for only 800,000. If you use a little ingenuity and stretch your materials, continued Washington, we'll let you make as many as 930,000 autos.

• **Wit's End**—By and large, Detroit thinks that's about as favorable a decision as it could have expected in the battle over second-quarter allotments (BW—Jan. 12 '52, p. 140). But the auto makers aren't optimistic about breaking the copper bottleneck. Detroit has just about run out of ingenuity in squeezing copper out of an auto.

It looks now as if the true production ceiling for the second quarter will be nearer 800,000 units—for at least three reasons:

• **Bulk of the copper** that goes into a car is concentrated in the radiator. Steel and aluminum radiators are not in the cards for a long time yet.

• **Auto electrical equipment**, which contains nearly all the rest of the copper in a car, is already the product of austerity designing. There's little left to squeeze out here.

• **Industry talk** has it that Detroit is not particularly eager to make more than 800,000 cars. It expects to have to push hard to sell even that many in the second quarter.

• **The Possibilities**—If the auto maker could get around copper in a car radiator, the red metal no longer would be a millstone around his neck. Of about 42 lb. of copper that goes into an auto, the cooling system eats up some 30 lb. General Motors tried coated steel for part of the radiators in its cars late last year. The substitution looked fine in lab and road tests, but when these cars got into customers' hands the radiators didn't stand up. It's costing GM more than \$10-million to replace them.

Aluminum looks good (BW—Oct. 13 '51, p. 52). But production and service obstacles retard its use in radiators. Just about all the auto and radiator companies have experimental cars running

with aluminum radiators. There are still a few bugs to get rid of, and after that it'll take a while to tool up for their manufacture. Aluminum units can't be fabricated in the same way and with the same equipment as copper ones.

Then, too, auto men are worried about what would happen to aluminum radiators in service. If water added to the cooling system has too high an alkaline content, it will corrode the aluminum. Another problem: repairing leaky aluminum radiators. They can't be soldered, so it looks as if a plastic repair patch would have to be made.

• **Bare Bone**—You might say that since Detroit is stuck with copper radiators, it might skimp a little on the copper. That's just what it's doing now. But they can't go too far in that direction because engines are getting more powerful. That calls for a bigger cooling job.

Copper-clad steel might save some copper, but there isn't enough around to begin with—and production capacity for the stuff is low. And in the light of GM's experience with steel, other makers are a little leery.

• **Not Enough**—The auto manufacturer is not going to get that 100,000 additional cars out of electrical copper either. To do this, the copper going into eight cars would have to be stretched to do for nine. So, instead of using, say, 42 lb. per car, they would have to get by with 37.3 lb. Assuming there are roughly 12 lb. of copper in car electrical equipment to begin with, that 4.7-lb. saving needed would represent a 39% slice. It just isn't there.

Already car makers have cut down on the gauge of wire for the lighting system. They're using thinner wire for the windings of starter motors. Even brass parts have come off the cars.

About all that could be done is to take some of the electrical accessories off the car, such as clocks and back-up lights. But sales departments don't like that because there's a nice profit percentage in these gadgets. Besides, the economy from that source would still fall far short of the goal.





# Craftsmanship

... GOES BEYOND THE SLIDE RULE AT H-P-M

"By the work, one knows the workman" ... what greater tribute can a customer pay a manufacturer or his product?

The illustration above shows an installation of H-P-M metal working presses at The Welding Fittings Corp., New Castle, Pennsylvania. When asked why his company standardized on H-P-M, Mr. Cliff J. Francis, General Manager of Welding Fittings Corporation replied, "Take a look at an H-P-M Press — you can tell by the careful attention to minor external details, the superb craftsmanship and engineering skill that

just has to be behind every H-P-M machine."

Craftsmanship ... ability accumulated through 75 years of specialized experience in the field of hydraulics ... truly does go beyond the slide rule here at H-P-M. It is this important, intangible ingredient in H-P-M equipment that assures the top performance which builds customer confidence.

And, customer confidence in H-P-M and H-P-M products is the corner stone upon which our business is built. Whatever your production problem, you'll profit by the specialized experience of H-P-M. Invite us in at the planning stage, won't you?



## THE HYDRAULIC PRESS MFG. COMPANY

1000 MARION ROAD

MT. GILEAD, OHIO, U. S. A.

Builders of Presses for the Metal Working & Processing Industries • Plastics Molding Presses • Die Casting Machines • Hydraulic Pumps, Valves & Power Units

IN YOUR FAVORITE HOTELS  
A "WHALE OF A LOT" OF

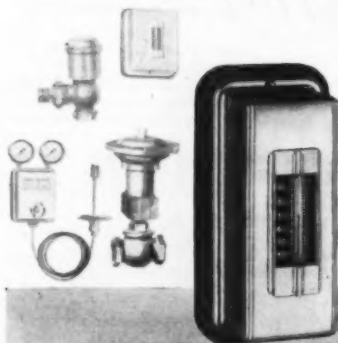
temperature  
is on duty



...because it takes a "whale of a lot" of engineering experience to manufacture, apply and install automatic temperature control equipment, particularly in hotels, where temperature and air conditioning requirements are many and varied. Johnson *Individual Room* control in guest rooms and public spaces is evident. There is the familiar thermostat on the wall! But, there is a "whale of a lot" of Johnson apparatus that you never see. In machinery rooms, Johnson Control is quietly at work on primary air systems and central plant air conditioning equipment "behind the scenes."

...because the Johnson organization, unique in American industry, is the only one devoted exclusively to manufacturing, planning and installing automatic temperature control systems. Each Johnson system is "Planned-for-the-Purpose," "Installed-for-the-Purpose" by Johnson's own men. Complete responsibility! Wherever you go, in office buildings, hotels, industrial plants, department stores, public buildings, restaurants and theatres, temperature comfort and fuel economy by Johnson provides the modern way of

regulating the heating, ventilating or air conditioning system of each particular building.



*The chances are* that you, too, will find it profitable to ask a nearby Johnson engineer for help in solving *your* temperature problem. Tell your consulting engineer or contractor to contact the Johnson branch office in your area. There is no obligation. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.



## Johnson Automatic Temperature and Air Conditioning Control

MANUFACTURE • APPLICATION  
INSTALLATION • SINCE 1885

## Neoprene at Sea

Coating the synthetic on ships' engine parts and propellers adds to their life, cuts repairs.

Neoprene, a synthetic rubber that does many jobs when resistance to corrosion and wear is needed, has added a new customer to its list: It's now being put to use on ships.

The Marine division of Sinclair Refining Co. is coating Neoprene on ship's engine parts and propellers to increase service life and cut down on repairs. Sinclair started the project about three years ago, with the cooperation of Gates Engineering Co., New Castle (Del.) supplier of the synthetic, which buys its raw materials from du Pont. But the two concerns aren't the only ones doing it. Sun Shipbuilding & Dry Dock Co. and the Navy's Bureau of Ships are also using Neoprene to keep new parts new in their overhaul work.

• **Easy Does It**—One of the advantages of Neoprene is that it's fairly simple to apply. You brush it on like paint, then cure it either by air or heat. Sinclair's engineers generally prefer the air curing method. It's a must for parts that can't be removed from the ship. But unless you give it enough curing time, the coating is likely to chip later.

For removable parts heat curing is the standard method. The heat makes a coating that is nearly permanent. If it wears away, it does so in small flakes that flow through pipes and valves without clogging.

• **There's a Limit**—So far most of the Neoprene applications have been made on engine and boiler parts, which are attacked by sea water, abrasive grit, and polluted harbor waste. Without a protective finish many large, costly parts last only six or eight years, require replacement or reconditioning three or four times during a vessel's lifetime.

There is a limit to Neoprene's applications on a ship, though. It can't be used on a tanker's cargo pipes, for instance. That's because an aromatic such as benzene or toluene might dissolve the Neoprene and carry some of the coating away with it.

• **Proof Positive**—Sinclair's latest applications have been on ships' propellers. Sea water corrosion gradually ruins a prop. It increases friction, diminishes the blade area, and deforms the prop's carefully designed shape. Eventually, a ship loses speed and burns more fuel.

On one ship on which Neoprene was used, the coating even improved the original performance of the propeller. By cutting down friction, the Neoprene boosted the speed by a little over 2%.



## ONE CLIP: **6577** PAPER FORMS!

To bring this bit of steel wire from the iron mines to your desk required 6577\* paper forms; 37 per cent of industry's time is spent in paperwork, analysts say. Probably much the same is true in your business. Still, there is a tendency to hunt in the factory for economies and speed-ups, letting paperwork "just grow"—overlooking a tremendous opportunity to make payroll and plant investment far more productive.

## DITTO STREAMLINES PAPER WORK!

Paperwork can be a clogging, costly thing—or with DITTO One-Writing Systems it can be a production tool which cuts out expensive delay and error, releases employees for creative work, coordinates and speeds action throughout your entire operation.

AMERICAN INDUSTRY DEPENDS ON

# DITTO.

## ONE-WRITING SYSTEMS!

In these days of defense pressure and heavy paperwork, large companies and small declare that their DITTO systems, machines and supplies are more than ever essential for their peak efficiency. Today's greatest economies and betterments are to be found in paperwork.


Ask for specific data showing how the DITTO Payroll, Production, Order-Billing, Purchasing and other systems definitely streamline your paperwork and bring benefits all down the line. No obligation, just write.

**DITTO, Incorporated,**  
2204 W. Harrison Street • Chicago 12, Illinois



\*ESTIMATED  
T. H. Mag. U. S. Pat. Off.

**Rotary**  
**Oilraulic Elevators**  
 For 2, 3 or 4 stories



Save up to 25% on installed costs with the "elevator that's pushed up." No penthouse or heavy load-bearing shaftway structure needed. New Rota-Flow transmission system insures smooth, quiet operation. Automatic floor leveling within 1/4 inch guaranteed. Car sizes, capacities and controls as required. Over 60,000 Oilraulic elevators and lifts now in use... backed by Rotary's coast-to-coast service organization. Write for Catalog 304. Rotary Lift Co., 1135 Kentucky, Memphis 2, Tenn.

**ROTARY OILRAULIC ELEVATORS**  
 Passenger or Freight

## Are YOU Ready for a TAX INVESTIGATION?



Not unless your records are systematically and safely stored... and readily accessible.

### FREE BOOKLET!

Send for our **MANUAL OF RECORD STORAGE PRACTICE**.

1. Tells how long to keep specific records for your protection.
2. Shows best procedures in record storage.

No obligation. Just clip this ad and mail to us on your letterhead. Offer good only in U.S. and Canada.



For economical record storage Liberty Boxes, with 25 stock sizes, answer your problems. 90,000 repeat users—positive proof of quality.

SOLD BY LEADING STATIONERS EVERYWHERE

**BANKERS BOX COMPANY**  
 Record Retention Specialists Since 1918  
 720 S. Dearborn St. • Chicago 5, Ill.

## Packaged Quality Control for Paper

Statistical service for paper makers is set up. Company concentrates on consumer angles and salvaging rejects.

Statistical quality control (BW—Jun. 30 '51, p. 45) is one of the most effective management tools to come along in recent years. But while it has caught like wildfire in some industries, it has failed so far to break into others.

If you're a mass-production manufacturer, you probably supply your customers with a statistical report on the quality of their order. By gauging the tolerance limits of your machines, measuring the particular jobs done by individual equipment, and applying statistical methods, you can get a reliable graphic picture of the quality of your output.

• **Craftsmanship**—But if your product needs craftsmanship, you'll find it hard to give a picture of the tailor-made work in cold figures. In some industries there is no way of getting over that hurdle. In others, the statistical experts are figuring out new ways to apply quality controls.

One group that has been slow to swing to statistical methods is the paper makers. Although they are mass producers, paper makers also consider themselves craftsmen. Some big producers have taken on quality control for competitive reasons. But most still prefer to rely on the art rather than the statistics of their industry to check their quality.

Now an outside company is trying to fill this gap. Paper Quality Control, Inc., Chappaqua, N. Y., has gone into the business of providing the paper consumer with a packaged service in quality control.

The firm works on a kind of consulting basis. You send it samples of a lot of your paper, say, tearsheets from each of 30 rolls. PQC runs the lot through its laboratory, tests its characteristics, and sends back a statistical report on the quality.

• **New Angles**—Donald Macaulay, president of Paper Quality Control, has an unusual approach. His service aims at the consumer instead of the producer. Still another innovation: Reports from Paper Quality Control recommend that substandard lots be adapted to other uses instead of being rejected outright.

Say you're a label printer, a box maker, or a comic book publisher. You might be particular about one or all characteristics: physical, chemical, or optical. If you're a label printer you'll want a paper that has a good gloss, and one that will easily accept ink. For a box maker, strength is a major point.

Paper Quality Control will gauge these for you, either on a subscription or a one-shot basis. From its findings, you'll know what you can expect even before the paper goes through the presses—how much ink the paper is going to use, for one thing. And your pressmen can adjust their equipment accordingly.

• **Ups and Downs**—If you take the service from the firm continuously, you'll be able to get an even better picture of the quality of the paper. The characteristics (or the quality based on statistics) of a product never are constant even from one work shift to another. In some cases there might be wide variations among the grades of a product supplied by a manufacturer. One lot of a "C" grade can have a better quality than some lots of the better "A" and "B" grades.

If PQC works for a paper buyer on a subscription basis, it can spot these ups and downs. Knowing the variations, it can advise a customer to rearrange individual lots of paper so that the over-all quality changes only gradually. That way, a printer won't have to make major adjustments of his presses as he would if the paper quality fluctuated to extremes.

• **Saving Rejects**—Paper Quality Control's idea of lot adaptation is an innovation in statistical methods. Most people who are quality-control minded use statistical methods to spot substandard work to be thrown on the scrap pile. Macaulay thinks that approach is costly and wasteful, at least for paper. He feels that not all poor-quality paper should be a total loss to customer or producer. Macaulay's experts will sometimes recommend that substandard lots be shelved temporarily and used later for press runs that aren't critical.

Sometimes, PQC has found, too much quality can be as uneconomical as too little.

In one case, a client wanted a paper that would give as much yardage as possible along with a low weight that would go safely through the presses. The client bought his paper from four different mills. PQC found that three mills stuck to the customer's specifications. But the fourth supplied a paper that weighed two to three points higher than the customer required.

When the mill moved the paper's weight down to the customer's specs, the customer, handling 1,200 tons per month, came out with a gain of \$7,000 worth of paper.



## The sterilizer that saved an operation

**S**TAMPING out parts for army and navy sterilizers created a serious problem for one manufacturer. Where brass had formerly been used in civilian models, War Department specifications called for stainless steel. And the dies that had been okay for brass had a tendency to stick to stainless steel, causing the punched holes to be ragged. That meant the sterilizer had to go through an extra polishing operation.

In addition, the dies were continually in the repair shop. They became worn after only a few hundred stampings. And the punches started to chip and crack.

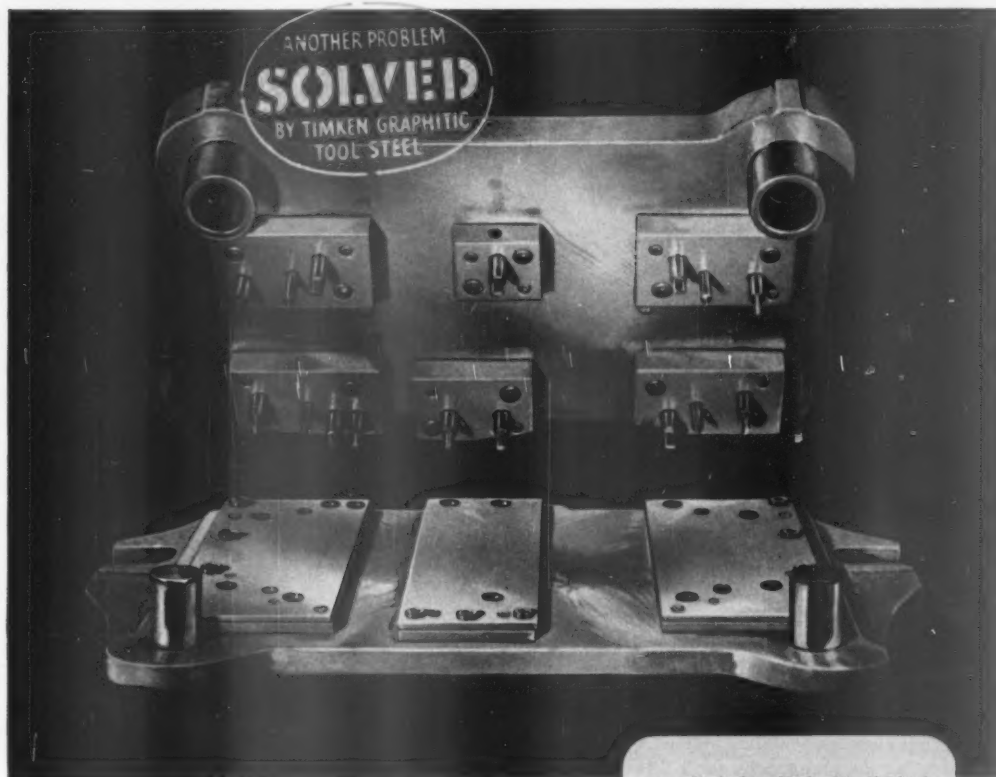
A new steel was needed for the dies that

would combine high wear resistance with non-seizing properties. But where was it to be found? The manufacturer turned to the metallurgists of The Timken Roller Bearing Company for help. After study, they recommended Graph-Mo—one of the four graphitic tool steels developed by The Timken Company.

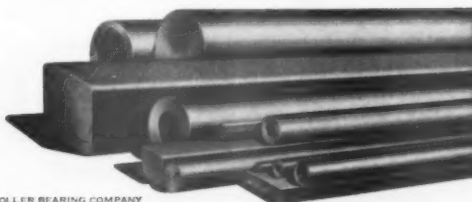
Because it contains diamond-hard carbides, Graph-Mo offers unusual resistance to wear. Free graphite in its structure retains the lubricant, keeps it from sticking to other metals. What's more, Graph-Mo is easy to machine, and its uniform response to heat treatment prevents distortion in hardening.

The manufacturer tried Graph-Mo and it filled the bill! The new dies showed no signs of wear after 12,000 stampings. Holes in the parts were clean and smooth. And the costly polishing operation was eliminated.

This is just one more problem that can be stamped: "Solved—by Timken Graphitic Tool Steel." It's a record unmatched by any other steel producer. We'd like to add your problem to the list. Just write The Timken Roller Bearing Company, Steel and Tube Division, Canton 6, Ohio. Cable address: "TIMROSCO". Alloy Steels and Seamless Tubing, Tapered Roller Bearings, Removable Rock Bits.



YEARS AHEAD—THROUGH EXPERIENCE AND RESEARCH



# TIMKEN

*Fine Alloy*

# STEEL

*and Seamless Tubes*

# How to make a Gold Mine pay

Gold is where you find it, just as the old saying has it. But often it's found in thin seams, mixed with prohibitive quantities of rock and gravel. That was the problem one western mining company faced in a digging so thoroughly mixed with gravel that it couldn't be profitably mined if handled by conventional mining methods. To make their mine pay was a question of handling vast quantities of gravel at the lowest cost-per-ton possible.

**Clue to this dilemma** was the terrific tonnages being handled in other type mines with conveyor belts. So, knowing that more high-tonnage operations are belted by Goodyear than by any other belt manufacturer, the mine turned to the G.T.M.—Goodyear Technical Man—for the design of an ore-handling system. He specified all the major belts for a 9-belt conveyor system from open pit to crusher, crusher to stock pile, storage to processing machinery and from processing to waste disposal areas.

**The belt system** was such an improvement, even on paper, that the mine operators knew they could operate at capacity. With the conveyor belts installed, the milling machines at the mine are being fed at the rate of 2200 tons per hour, far

above the capacity of less-efficient transport methods employed previously. Eventually, 67 million tons of brittle, abrasive porphyry ore will give up its gold in the plant. This tonnage—like everything handled by conveyor belts—will be carried at the lowest possible cost-per-ton.

**Handling gold**—or other bulk cargo—can at comparable savings too. So ask the G.T.M. cents figures to show you. Write him c/o Goodyear



FOR HO  
built to  
Distribu

FLA  
world  
Look

al,  
oba  
you  
for  
how  
able  
Akr



FLAT BELTS, V-BELTS, MOLDED GOODS, PACKING, TANK LINING, RUBBER-COVERED ROLLS  
 world's highest standard of quality, phone your nearest Goodyear Industrial Rubber Products  
 Look for him in the yellow pages of your Telephone Directory.

al, logs or any  
 obably be done  
 your operation,  
 for dollars-and-  
 how conveyori-  
 ble operations.  
 Akron 16, Ohio.

**GOODYEAR**  
 THE GREATEST NAME IN RUBBER

We think you'll like "THE GREATEST STORY EVER TOLD"—Every Sunday—ABC Network

## Judge it by the men who praise it

### *Industry's machine operators...*

The widespread preference for Cutler-Hammer among the men who use motor-driven machines day after day and know the importance of control equipment could be earned only by dependable performance.



### *Leading machinery builders...*

Of the many evidences of Cutler-Hammer Motor Control leadership, none is more impressive than the roster of machinery manufacturers featuring Cutler-Hammer Control as their standard or recommended equipment.



### *Electrical maintenance men...*

Claims and counterclaims mean little to the men who spend their lives keeping electrical equipment working properly. These practical men know the facts by actual comparison when they say, "Cutler-Hammer is No. 1".

Does it matter whether you specify the motor control you buy by name? Is there any real difference between the various makes of motor control you are offered? They all look very much alike. Is it fact or fancy that there are marked differences in the way they will perform, in the dependability with which they will do their work, in the length of service they will provide?

If these questions have never been answered to your complete satisfaction, ask the men who *know* motor control. Ask your most experienced machine operators and your electri-

*Cutler-Hammer general purpose motor control is recommended by a majority of all electric motor manufacturers, featured as standard equipment by leading machinery builders, and carried in stock by recognized electrical wholesalers in every locality.*



cal maintenance men. Check with the builders of the best machines you use, the ones you know are products of the best engineering; see what motor control they supply or recommend. Cutler-Hammer Motor Control has won the respect of technical men everywhere by performance, dependable performance born of the widest of all specialized motor control experience. You can safely judge Cutler-Hammer by the men who praise it. CUTLER-HAMMER, Inc., 1275 St. Paul Avenue, Milwaukee 1, Wis. Associate: Canadian Cutler-Hammer, Ltd., Toronto.



## Porous Steel

New process turns out parts with any desired density from 92 lb. to 453 lb. per cubic foot.

When a manufacturer wants a metal part at minimum cost, he normally thinks first of cast iron. One of these days though, he may be able to beat even cast iron on price. That's what Ontario Research Foundation says will happen when its new lightweight steel process, now in pilot-plant experimentation, gets into production.

ORF's trick is a neat one. It simply varies the weight of the metal by getting any desired degree of porosity. If a lightweight metal is wanted, the product is given a large number of pores, or air holes. For a heavier metal, the material is simply made more dense. In this way, a part made of lightweight steel uses a smaller amount of metal than the same part made of cast iron—thus allowing the steel to compete price-wise with the iron.

• **Featherweight**—Such lightweight steel can be made as light as plastics and wood, or even magnesium and aluminum. In fact, wood screws can be driven through the stuff, and it can be cut with ordinary woodworking tools.

Ordinary steel weighs about 490 lb. per cubic foot. By controlling the density of its steel, ORF can produce a material that weighs from 92.5 lb to 453 lb. per cubic foot. Aluminum weighs 163 lb. per cubic foot, magnesium, 109 lb.

• **How It's Done**—The process that achieves these steels is really a variation of metal casting. Instead of pouring a molten metal into a mold, ORF begins a step further back in the production process—at the stage where the metal is still in the form of ore.

First impurities like silica are removed from the ore, leaving only pure iron oxide. The ore particles are ground down to a fine size.

Then the ore is poured into porous molds, and ore and molds are placed in a ceramic crock, which is then filled with coke and limestone. The crock is put in a furnace and kept at a temperature of 2,000F for several hours. Out comes a part with a cellular structure. It's full of small holes—each hole separated from its neighbor.

P. E. Cavanaugh, ORF scientist who helped develop the process, says he controls density of the steel by controlling ore particle size, furnace temperature, and length of exposure in the furnace.

• **Balance Sheet**—The method is really a first cousin of the powdered metal technique. It's cheaper because the briquetting of the part—pressing the

## A True Story\* of . . . The Salesman who became sold



1. Traveling from New York through the South, Jack Gaylord is a busy salesman who must cover many miles a year to earn a comfortable income.



2. Because his earning power is directly dependent upon his ability to get around, Jack bought a U. M. non-cancellable and guaranteed renewable sickness and accident policy after his agent explained its advantages.



3. Five years later, in July 1950, polio struck and Gaylord was disabled for 7 months. He had no sooner recovered than he was again laid up for 6 weeks with influenza.



4. Thanks to his sound insurance protection from Union Mutual, he received a total of \$1,059.33 in regular monthly income and payment for his hospital bills during both illnesses. Today, he is completely sold on the importance of non-can protection.

**Moral:** Both sickness and accident can strike without warning—and repeatedly. The only kind of insurance that continuously protects you is *noncancellable and guaranteed renewable*. You owe it to yourself to know the true facts about this unique type of policy.

Your local Union Mutual agent is listed in the yellow pages of most metropolitan telephone directories. Ask him to tell you about Non-Can, or write to us for a free copy of "The Whole Story", written in clear, simple language.



\* This true case history is typical of many thousand Union Mutual policyholders who know they can't buy better disability income protection.

For your own peace of mind . . .

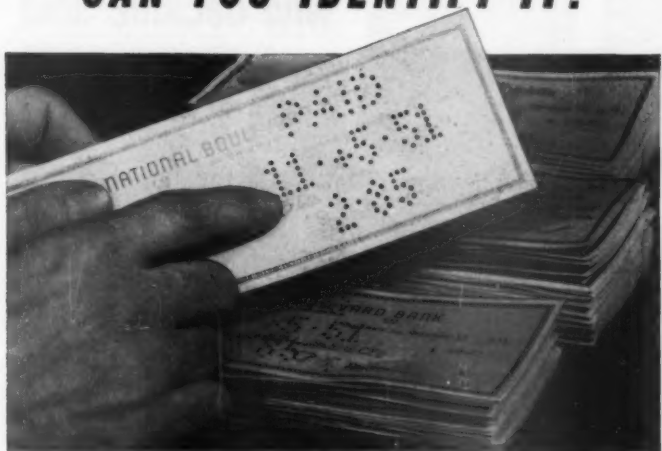
## Disability Income Protection

Underwritten by the UNION MUTUAL LIFE INSURANCE COMPANY

Agencies in principal cities • PORTLAND, MAINE

# Best known trade mark in America

## CAN YOU IDENTIFY IT?



## It can cut labor cost up to 90% on your multiple marking!

The holes you can read are the Cummins trade-mark—and have been since 1887 when Cummins perforating originated the fastest known method of permanent, ever-legible multiple marking.

Today, businessmen are learning the amazing cost-cutting that Cummins perforating brings. One chain store reports that with a \$1,000 investment (2 machine unit) Cummins multiple marking does the work of five clerks, nets \$10,000 yearly payroll savings\*.

If your business validates, approves, dates, receipts, numbers, codes or cancels invoices, purchase orders, shipping tickets, sales slips, coupons, labels or other internal papers, a Cummins Perforator can pay its cost many times over.

Get the facts today—possibly new to you, but proven for 63 years. Don't delay, mail the coupon now.

IN BUSINESS AND BANKS SINCE 1887

# Cummins

Cummins-Chicago Corp.

Cummins-Chicago Corp.  
Chicago 40, Ill., Dept. BW-12

\*I want proof and facts. Send me  
Certified Gould Reports on several present users.



ORIGINATORS  
OF  
PERFORATORS

Name.....  
Company.....  
Address.....  
City..... State.....

Clip and Attach to Your Letterhead Today

YOU CAN'T ERASE A HOLE

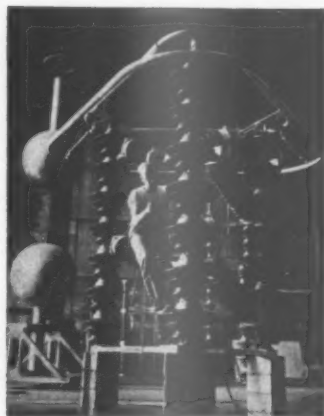
powder into shape before putting it in the furnace—is eliminated. Dimensional tolerances, however, aren't so close as with powdered metal parts; the accuracy is closer to that obtained with iron castings.

### PRODUCTION BRIEFS

The process piping and auxiliary lines for the Atomic Energy Commission's gaseous diffusion units at Paducah, Ky., will be built by M. W. Kellogg Co. at a cost of \$75-million. They are specially designed for corrosion resistance and low-temperature operation.

A survey on research activities of 125 manufacturers, made by the National Industrial Conference Board, shows these trends: a jump in expenditures in 1952 from 10% to 25% over last year, a shift toward more fundamental and new-product research, and companies will do more work in their own labs rather than outside.

U. S. Steel announced that it will start pouring steel ingots at its new Fairless Works by the end of June. Come September, it expects to reach full capacity of 1.8-million tons.



### Lightning Trapper

The old lightning rod may be as outmoded as the celluloid collar. But its principle is still widely used by industry. Westinghouse Electric Corp. built this three-legged job to trap lightning for studies in its high-voltage laboratory. To keep it small, the trap has spiral-shaped arresting elements. That way, it can be mounted on wheels and moved around the lab. The studies made with the trap will help Westinghouse design protective equipment for power stations and transmission lines.



**... IN DEFENSE  
PRODUCTION!**

Aircraft engine parts, shells and shell casings, rockets and many other items for defense use.

Wheels, brakes, hubs and drums for cargo trailers, troop carriers, tanks, gun carriages, etc.

Electric brakes, brake power equipment, power chambers and valves for all military vehicles.



**... IN PEACE TIME  
PRODUCTION!**

Wheels, brakes, hubs and drums for passenger cars, buses, trucks and tractor-trailer combinations . . .

Electric brakes, brake power equipment, power chambers and valves for civilian vehicles . . .

Complete foundry, machining, pressed metal stamping, testing, inspection and engineering development facilities.

**KELSEY-HAYES WHEEL COMPANY**

**EXECUTIVE OFFICES, MILITARY AVENUE • DETROIT 32, MICHIGAN**

**7 GREAT PLANTS:**

McKeesport, Pa. • 2 Plants in Detroit  
Jackson, Mich. • Davenport, Iowa  
Los Angeles, Calif.  
Windsor, Ont., Can.



*"I told you so . . .  
he's plumbed  
with Aeroquip Flexible  
Hose Lines."*

**Aeroquip**

FLEXIBLE HOSE LINES  
DETACHABLE, REUSABLE FITTINGS  
SELF-SEALING COUPLINGS  
BREAKAWAY COUPLINGS • HYDRAULIC SCOPES  
AEROQUIP CORPORATION, JACKSON, MICH.

## FEDERAL IS TOPS

ON COMPLEX  
BUSINESS FORMS

Including  
**SNAP 'N PART**  
CARBON INTERLEAVED  
SEYS



We design and print forms to solve every business problem. Prompt service, attractive prices.

### Other Federal Specialties

Multiple carbon forms . . . carbon-interleaved statements . . . voucher and payroll checks . . . forms requiring spot carbon or die-cut carbon . . . business machine forms

**FEDERAL Business Products, Inc.**  
90 GOLD ST., NEW YORK 38 • CO 7-8850  
PRINTERS OF BUSINESS FORMS SINCE 1926

## NEW PRODUCTS



CAR APPROACHES RAMP where roller device guides wheels into driving grooves.

## New Garage Parks Your C



MINUTES LATER car is neatly parked in its own stall on spacious upper deck.





CAR ASCENDS RAMP, which can be swung away to make extra throughway.

## Car in Three Minutes Flat

Trying to park downtown near a favorite store has become a hopeless task for many U.S. urbanites. And both store owners and city councils are finding that cramped parking space doesn't make for very good publicity. Beverly Hills, Calif., is one of the towns that has gone and done something about it.

Since the Beverly Hills shopping center borders on residential areas, zoning restrictions outlaw large, back-door parking lots. There was just one solution—to build upward instead of outward. The result is a modern, four-deck garage, with several novel features.

• **Novel**—Engineers Pereira & Luckman designed the open-air structure, and Multi-Deck Corp. of America built it. Use of mass-produced and prefabricated parts cut construction time down to 60 days and pared building costs. The garage uses light-gauge steel rather

than bulkier reinforced concrete. Columns are only 5 in. by 5 in., and because most of the assembly is bolted, with only a minimum of welding, you can dismantle the building with little damage to its components.

Here are some of the garage's special features:

- Swing-away steel ramps instead of stationary concrete ramps that eat up space. With the ramp up, you have a throughway that gives you more space on the floor. The attendant just reaches from the car and pushes a button—the ramp moves automatically into position.

- A patented wheel-aligning device using metal rollers to guide the wheels of a car onto the driving troughs of the ramp. This reduces turn-around space needed, speeds up handling time.

- Attendants ride up on a stand-

BE **RIGHT**  
NOT **SORRY!**



**BUILDS SPECIALS**  
**TO YOUR BLUEPRINTS**

You'll never have occasion to compromise your plans by fitting them to "off-the-shelf" bearings when you call on Aetna. Aetna will engineer and mass-produce special bearings or precision parts to fit your designs—to your exact physical requirements—under strictest laboratory control . . . and at surprisingly moderate cost.

Our experience has been so extensive in producing special bearings and parts, from either customer or our own designs, and our variety of tools and dies so voluminous, that your specials can usually be set-up for manufacture without extra tooling cost.

Write today. Just state your problem, send your prints, or ask that a near-by representative drop in. No obligation.

**AETNA BALL AND ROLLER BEARING CO.**  
4600 Schubert Avenue, Chicago 39, Ill.

**Aetna**

Standard and Special Ball  
Thrust Bearings • Angular  
Contact Ball Bearings •  
Special Roller Bearings • Ball  
Retainers • Hardened and  
Ground Washers • Sleeves •  
Bushings • Miscellaneous  
Precision Parts



Equipped For Sizes  
From 3/4" I.D. to 36" O.D.



# BROWNHOIST LEADERSHIP

## 1877 - 1952

● 75 years ago Brownhoist built its first locomotive-crane. This little machine represented a big step forward in material handling for that day and age. It also established the Industrial Brownhoist leadership which has continued ever since.



1877

1927



● Through the years, Brownhoist has continued to pioneer improvements in crane construction, design and performance and to build cranes that have been rugged and dependable under continuous heavy duty operation.

1952

● Today Industrial Brownhoist Diesel Electric Locomotive-Cranes are the finest machines available. They perform double duty as switch engine or crane. They also work equally well with magnet, hook or bucket. Available in capacities from 30 to 80 tons. Write today for complete information.



### BROWNHOIST builds better cranes

CLAMSHELL BUCKET



330 TON WRECKING CRANE



COAL-OSE BRIDGE



CAR DUMPER



**INDUSTRIAL BROWNHOIST CORPORATION • BAY CITY, MICH.**  
DISTRICT OFFICES: New York, Philadelphia, Cleveland, San Francisco, Chicago, Canadian Brownhoist, Ltd., Montreal, Quebec • AGENCIES: Detroit, Birmingham, Houston, Los Angeles



**FIREMAN'S POLE** cuts attendants' down time, speeds parking.

ard one-man lift, but they get down even faster—on a fireman's pole.

● **Eye-Opening**—The garage stores 394 cars on the same lot that once held only 106 cars. Yet the operator claims he can deliver a car in three minutes. The building is only 22 ft. 6 in. high; such a garage built to hold 500 cars would be less than 24 ft. high. And the costs are really eye-opening. Multi-Deck Corp. says that the building, with a total of 94,848 sq. ft., cost \$317,200, or \$805 per car, compared with an average of upwards of \$2,000 per car in a conventional reinforced concrete garage.

● **Source:** Multi-Deck Corp. of America, 7,324 Santa Monica Blvd., Los Angeles.

### Punch Press for Jets

Punching holes in jet engine shroud rings (the rings on which stationary blades are mounted) is no easy job because of the toughness of the stainless steel used in the rings. But Danly Machine Specialties, experts at the job of punching holes (BW-Nov.3'51,p54), has developed a machine that does the trick. A takeoff from Danly's other punch presses, the machine has a capacity of 56 tons at 10,000 psi. working pressure. It takes only 5 minutes to pierce 80 blade slots in a ring.

● **Source:** Danly Machine Specialties, Inc., 2,100 S. Laramie Ave., Chicago.  
● **Price:** \$15,000 to \$50,000 per installation.

### Vinylite Wash Primer

Vinylite is turning up in all shapes and forms from baby's toys to pipes and tubes. Now you can get a wash primer, based on Vinylite resin, for



## Picture-Framers for the finest gallery on earth

**Today—in the nation's leading railroads—in the most modern buildings—in thousands of buses, street cars and trolley coaches—countless men and women are viewing the pictures that make up the landscape of America, framed clearly and cleanly behind ADLAKE Aluminum Windows.**

**Like all good picture frames, ADLAKE Windows are built to be looked *through*.** Their handsome extruded aluminum sash blends in tastefully with modern or traditional appointments . . . their no-maintenance construction makes them easy to keep sparkling clean . . . their snug weather stripping keeps interiors free of drafts, dust and moisture.

**No wonder we're proud to call ourselves PICTURE FRAMERS to the finest gallery on earth!**

Let us prove how Adlake Windows can benefit you regardless of your problem. Just drop a card to The Adams & Westlake Company, 1127 N. Michigan Avenue, Elkhart, Indiana. No obligation, of course.



**In leading railroads . . . Adlake Aluminum Breather Windows—with exclusive Adlake "Breather" which keeps windows always clear without dehydrants or drying compounds!**

**In modern buildings . . . Adlake Aluminum Windows with woven pile weather stripping and exclusive serrated guides—they require no maintenance—last as long as the building!**

**In street cars, buses, trolleys—Adlake Aluminum Sash hold down maintenance costs—feature easy operation, complete weather-tightness, long trouble-free life!**

# Adams & Westlake

## Preliminary PENSION STUDY

A preliminary study by our pension and actuarial staff will provide you with complete, factual and unbiased advice on your company's retirement problems. Send without obligation for our brochure, "Planning a Successful Retirement Program for Your Company."

### MARSH & McLENNAN INCORPORATED

INSURANCE BROKERS • CONSULTING ACTUARIES

Chicago New York San Francisco Minneapolis Detroit Boston Los Angeles Pittsburgh  
Seattle St. Louis St. Paul Duluth Indianapolis Portland Superior Cleveland Buffalo  
Washington Columbus Phoenix Vancouver Toronto Montreal Havana London



**FOLDS**  
*so easily..*

**SAVES**  
*so much*

You'll be surprised at the time and money you save when you fold your monthly statements, form letters, advertising literature, etc., on a Davidson Folding Machine. Any girl can operate it . . . and she'll do the entire job . . . quickly . . . easily . . . at a fraction of the usual cost. And even tho you use it but once a month, it will quickly pay for itself. A demonstration will show what we mean. Write today. No obligation.



**Davidson**  
**FOLDING MACHINE**

DAVIDSON CORPORATION  
A Subsidiary of Mergenthaler Linotype Company  
1934-60 West Adams St., Chicago 7, Illinois

metals and alloys. The primer not only provides an adherent base for top coatings, but is also highly resistant to underfilm corrosion. Called Vorac H-400, it dries to a tough film in less than 30 minutes, says Vorac Co. It's already being used for protection against salt water corrosion and fouling in aeronautical and electrical parts and in providing the undercoat for many hardware accessories.

• Source: Vorac Co., 162 East 38 St., N. Y. C.

• Price: \$5.95 for 5 gallons.

### NEW PRODUCTS BRIEFS

Prepare metals for rustproofing with Water Displacing Liquid No. 51. The liquid repels water from the metal, then evaporates. It leaves a thin film that prevents staining and tarnishing and is compatible with rustproofing and lubricating oils. It's from Enthone, Inc., New Haven, Conn.

A stonepicker from Bridgeport Implement Works, Stratford, Conn., will ease the farmer's job. It covers two to four acres a day, pulverizing the top soil and picking it clean. It collects all stones from 10 in. down to 1½ in., is powered by a 3-hp. to 6-hp. gas engine.

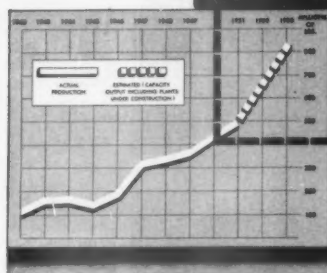
An automatic bartender pours cocktails in the right proportions every time. Just hold a cocktail mixing glass against the solenoid tripper in AutoBAR's electric machine. AutoBAR's Veeder-Root counter registers number of drinks poured, makes book-keeping easy. Maker is AutoBAR, a division of American Machine & Metals, Inc., Sellersville, Pa.

A portable printer and addresser, made by Heyer Corp., Chicago, is called Dupli-Kit. The printer automatically inks a small stencil so you can print envelope stuffers, tags, price cards, and the like. The addresser has a roll of 250 addresses, which are "rolled on" to an envelope. Each roll is good for 100 impressions.

A handy "gadget" to speed up letter folding operations costs only \$14.75. All you have to do is place up to ten sheets of paper on a rubber-padded board, and press down a broad handle on the paper. The result: two properly spaced creases on the 8½ x 11 in. sheets, just right for a No. 10 envelope. Inexperienced operators can turn out 500 folded sheets an hour. You buy it from I. J. Knoll, 79 Wall St., N. Y. C.



# Years of Historic Progress in Aluminum



Above: Reynolds immediate goal of increased aluminum production. At left: a decade of expanding primary aluminum production—a historic chapter in the company's 33 years of continuing growth.

1951 saw the U.S. aluminum industry rise boldly to meet the urgent need for more aluminum . . . saw Reynolds capacity expand to make 1952 an even greater year, 1953 greater still! Bauxite shipments from Reynolds holdings in Jamaica, site of the largest known deposits, begin in 1952. This resource, together with Reynolds domestic and Haitian ores, will provide the company with bauxite for many generations.

Reynolds is a leading advocate of *more aluminum* . . . more U.S. aluminum, made in the U.S. by U.S. labor, to strengthen this nation's defense and its civilian economy. For Reynolds firmly believes that the Age of

Aluminum, though opening wide and bright in so many fields, is only just dawning . . . in the building industry, transportation, the electrical industry, in the manufacture of all durables, and in aluminum foil packaging.

Faith in the future of aluminum is evidenced by private financing of Reynolds current production expansion. Investment in aluminum is backed by an irresistible trend toward the metal that performs better, lasts longer, and saves labor . . . the only basic material that costs less today than before World War II.

Reynolds Metals Company, General Sales Office, Louisville 1, Ky. Executive Office: Richmond 19, Va.



Reynolds new San Patricio reduction plant, near Corpus Christi, Texas—yearly capacity 150,000,000 lbs.—is nearing completion. A new alumina plant, 1,000 tons per day, is proposed nearby—integrated operation from ore to metal.



Reynolds loading dock at Ocho Rios, Jamaica. Rich bauxite from Reynolds Jamaican mines will reach this dock by overhead conveyors, for transportation in special self-unloading ships over the short ocean haul to Corpus Christi.



Reduction plant at Jones Mills, Ark. Another Arkansas plant is proposed for 1953 operation—120,000,000 lbs. This would bring Reynolds yearly output to 829,000,000 lbs.—two-and-a-half times the U.S. total before World War II.

Pioneers of  
Progress  
Through  
Aluminum



# REYNOLDS ALUMINUM

"The Kate Smith Evening Hour" on Television, Wednesdays—Tallulah Bankhead in "The Big Show" on Radio, Sundays—NBC NETWORKS



THE SOLDIER could not talk, but Columbia's president has given plenty of clues to . . .

## What Eisenhower Stands For

As a Presidential candidate—willing but not competing—he is right of center on domestic issues. In foreign affairs, he's a convinced internationalist.

"The Presidency should be neither sought nor declined."

That political maxim—more often forgotten than remembered—just about sums up what General Eisenhower said in Paris last week when he broke the long silence on his political intentions. He made it clear he would accept the Republican nomination for the Presidency if it were offered to him, but he wouldn't fight for it.

The news from Paris gave Eisenhower's boosters a real lift, but it leaves them with a tough job: to bring off a successful draft without help from the candidate. Answering the question:

"Where does Eisenhower stand?" will be a big part of the task faced by Eisenhower's manager, Sen. Henry Cabot Lodge, Jr., in rounding up delegates.

• **Out of Uniform**—Actually, Lodge has a good deal of material to work with. Although the general has not pulled his ideas together in a book, as Sen. Taft has (BW—Nov. 17 '51, p80), he has spoken out on public issues more than any other military man in this country today. That's largely due to his having been out of uniform for two years as president of Columbia University.

A canvass of 85 books, speeches, in-

terviews, statements, and official letters shows that Eisenhower is:

- Somewhat right of center on matters of domestic policy—closer to Taft than to Dewey.

- Strongly internationalist in foreign policy. On foreign affairs he is squarely with the Dewey-Lodge-Duff-Warren wing of his party, as against the Taft wing.

### I. His Background

Eisenhower's personal political philosophy clearly reflects his upbringing in a rural Kansas community. It shows through time and time again. For example, at a civic reception in St. Louis in 1947, he said:

"On the solid foundation of human rights established by our forefathers has been built a mighty structure which stands before the world as a stronghold of freedom and democracy. Its girders are pioneer traits of initiative, resourcefulness, self reliance, and pride in achievement."

Because of his belief in these "pioneer traits" he has severely criticized the idea that security for the individual in a democracy can be assured by the state. This is what he told the St. Andrew Society dinner in New York City in 1949:

"We seek an illusory thing called 'security' . . . I do not believe that security, in the sense that we may live in slothful indolence and ease and stagnation, can ever be achieved, unless we do it, gentlemen, as slaves of someone who directs us . . ."

Eisenhower went on to deliver his famous "beer and hot dogs" remark, which has been the object of considerable attack. In discussing the emphasis on security through governmental policy, he said:

"Possibly we have become too regardless of things we call luxuries. Possibly we like to wear 'fried' shirts too well—I don't know. Maybe we like caviar and champagne when we ought to be out working on beer and hot dogs. Whatever it is, the thing that has happened to us, gentlemen, is of the spirit."

Eisenhower's discussion of domestic policy has of necessity been general. Seldom has he dealt with an issue in terms of a specific bill before Congress. His remarks are more in the nature of yardsticks against which his position in the range of current political opinion can be measured. They point pretty plainly in an anti-New Deal or anti-Fair Deal direction.

In a New York City speech in 1949, he said:

"Seemingly somewhere along the line



## *...turning wings into fuel tanks*

With the increased operational range of the modern airplane, up to *three tank cars* of fuel may have to be carried. Such capacity involves a real problem in design. One answer is the "integral wing tank" where large sections of the wing become integral fuel tanks. Working closely with aircraft engineers, 3M developed a sealer that closes the cracks and crevices, tightly sealing the fuel space.

Consider the requirements such a sealer must meet. It must adhere perfectly to the metal under severe service conditions. It must resist rapid and extreme changes in both pressure and temperature. It cannot crack or lose adhesion with wing flex nor can gas or oil change its properties.

3M integral fuel tank sealers are only one specialized type of adhesive . . . and the development of many such compounds for all industry is a specialty of 3M.

### **See what adhesives can do for you . . .**

WRITE FOR 3M'S 32-PAGE BOOKLET ON ADHESIVES, COATINGS AND SEALERS. IT'S FILLED WITH INTERESTING INFORMATION AND EXAMPLES OF SUCCESSFUL APPLICATIONS IN ALL INDUSTRIES. ADDRESS YOUR REQUEST TO 3M, DEPT. 11, 411 PIQUETTE AVE., DETROIT 2.



**ADHESIVES • COATINGS • SEALERS**

**ADHESIVES AND COATINGS DIVISION • MINNESOTA MINING AND MANUFACTURING COMPANY**

411 PIQUETTE AVE., DETROIT 2, MICH.

GENERAL OFFICES: ST. PAUL 6, MINN.  
EXPORT AND CANADIAN SALES: 270 PARK AVE., NEW YORK 17, N. Y.



To get high production quickly in special machining operations is a problem manufacturers run into every day. Machining by hand on standard machine tools is too slow, too costly. Expensive, custom-built special purpose machines are often out of the question.

But if you have a tool engineer or designer with imagination, you can build many special purpose machines right in your own tool room, quickly and inexpensively.

The machine shown above was designed by S. J. Biello of Harvil New England Corporation and built in their own tool room. Two standard drill presses, and two Bellows electrically controlled Drill Press Feeds; a dial table and ejection device powered by two Bellows Air Motors, made a machine that was so fast it required two operators to keep pace with it.

Ingenuity and Bellows "Controlled-Air-Power" Devices help thousands of manufacturers get better, faster and safer production in second-operation machining.

**Would you like the complete story on this and other machining operations?**

Write for Foto Facts File FF47-778 and for a copy of "Faster, Safer, Better Production." Free on request. Address Dept. BW152, The Bellows Co., Akron 9, Ohio.



**The Bellows Co.**

ESTABLISHED 1907  
AKRON 9, OHIO

we have lost some respect for mere thrift and independence . . . Now we recognize the degree to which we have changed when we come to see that the definition of a liberal is a man who, in Washington, wants to play the Almighty with our money."

## II. Centralization Peril

A strong fear of increased centralization dominates Eisenhower's discussion of the role of government in our society as indicated by this theme from his inaugural address at Columbia in 1948:

"The concentration of too much power in centralized government need not be the result of violent revolution or great upheaval. A paternalistic government can gradually destroy by suffocation in the immediate advantage of subsidy the will of the people to maintain a high degree of individual responsibility." These ideas have a corollary in his stress on the free enterprise system. To him "there can be no democracy without free enterprise." In St. Louis in 1949, he said:

"Our freedom from degrading pauperism is due to America's deep-seated sense of fair play translated into adequate law; to American industrial initiative and courage; to the genius of the American scientist and engineer; and to the sweat, organizing ability and the product of American labor in a competitive economy. It is not the result of political legerdemain or crackpot fantasies of reward without effort, harvests without planting."

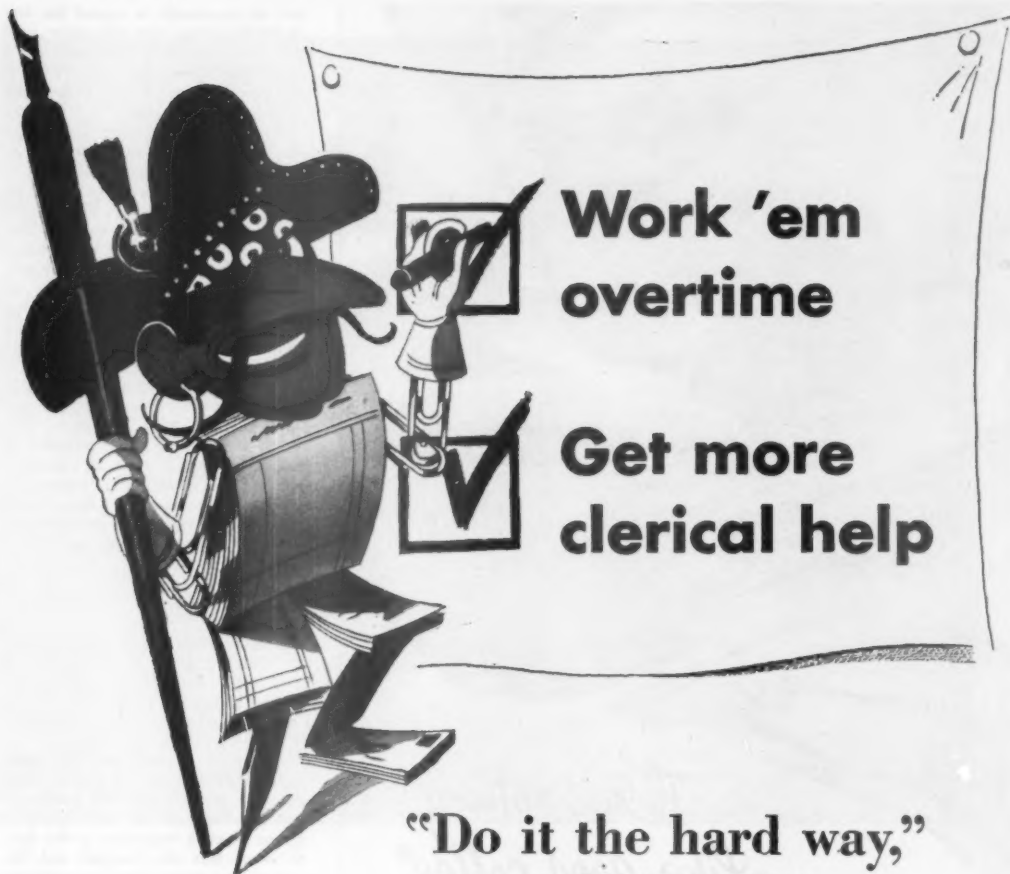
Translating this home-rule, anti-centralized government philosophy into specific cases is something Eisenhower has yet to do. No one obviously could turn the clock back with respect to social and economic legislation put on the statute books by the New Deal and the Fair Deal. But Eisenhower, if nominated and elected, can be expected to hunt solutions for social and economic problems at lower levels of government with a minimum amount of federal intervention.

## III. Federal Aid

In one case, federal aid to education, Ike has gone on record. As president of Columbia University he wrote Rep. Ralph Gwinn of New York with respect to the Administration's bill:

"I am well aware that there are certain sections of this country where the tax revenue potential of each will not provide for all of the children in that area that level of education deemed generally required in discharging the duties of an enlightened electorate. In such areas I would heartily support federal aid under formulas that would permit no abuse, no direct interference of the federal authority in educational processes





**"Do it the hard way,"**

**says the Paperwork Pirate**

**YOU** can follow the advice of the Paperwork Pirate and add clerical hours to an already overburdened staff—maybe hire new inexperienced help—or you can follow the lead of companies who have found the answer to both man-power problems and increased work loads in paperwork mechanization.

For example, much of the writing in both factory and office is *repeat* writing. It's writing the same words and figures over and over. This writing can all be done mechanically the Addressograph way—30 to 50 times faster—with never an error—never an erasure—never an illegible copy.

In almost every department of large business and in every small business, there are opportunities to save time, cut costs and get work done faster with simplified Addressograph methods. New Addressograph Accounting models extend these savings to repetitive figure work and combine the advantages of accounting machines with those of Addressograph—further speeding operations.

Call the Addressograph office, your city. We can help you study your repetitive writing procedures; make suggestions for savings through paperwork mechanization. Addressograph-Multigraph Corporation, Cleveland 17, Ohio—Simplified Business Methods.

© 1951 A-M Corp.

# **Addressograph-Multigraph**

**Production Machines for Business Records**

**SERVING SMALL BUSINESS - BIG BUSINESS - EVERY BUSINESS**



*"There's nothing  
like good coffee"*

While you may not have heard our name, Otis, McAllister & Co. has long been known to American roasters famous for the world's finest coffees. With 16 affiliated offices in Central and South America, we have been a dependable source for fine coffee since 1892.

Coffee is the economic life blood of many Latin American Republics. Coffee means dollars to these countries—enables them to buy—and Otis to assist in selling many famous American products, such as: *Sun-Maid Raisins, Pillsbury Flour, Kellogg Cereals, Evangeline Hot Sauces, Denner Bakery Supplies, Armour Meat Products, Golden State Milk*, to mention a few.

## OTIS, McALLISTER & CO.

Established 1892

Importers of Selected Quality Coffees  
Exporters of Leading American Products

SAN FRANCISCO • NEW YORK • NEW ORLEANS  
CHICAGO • LOS ANGELES • TORONTO



and no opportunity to expand the flow of federal money into areas where need could not be clearly demonstrated. I would flatly oppose any grant by the federal government to all states in the union for educational purpose."

This position on education might well be the key to Eisenhower's views on other issues such as health.

His opinions on social security legislation of various sorts is not on the record in any such clear form as that on education. In his New York Herald Tribune Forum speech in 1949 Eisenhower spoke of the government's responsibility to help meet the unavoidable "shocks and privations" of our complex industrial society. But he also shows considerable concern about picking what he regards as the right methods. It seems to be a question of means as well as ends. This is what he said:

"As we strive to devise measures intended to lessen the shocks and privations incident to old age, to sickness, to unemployment, to natural disaster, let us choose among the several proposals that which best protects our heritage of freedom."

### IV. Civil Rights

In his speeches Eisenhower has dealt often with the issue of civil rights, although his position on a specific matter such as FEPC remains to be disclosed. In his United Jewish Appeal address of 1947 in Washington he stated:

"Every person everywhere who holds in his heart a respect for human values and who venerates right and justice will wish you well and will draw from your success renewed inspiration in the fight to insure that the humblest and the weakest may forever stand in confidence and equality in the presence of the proudest and the strongest."

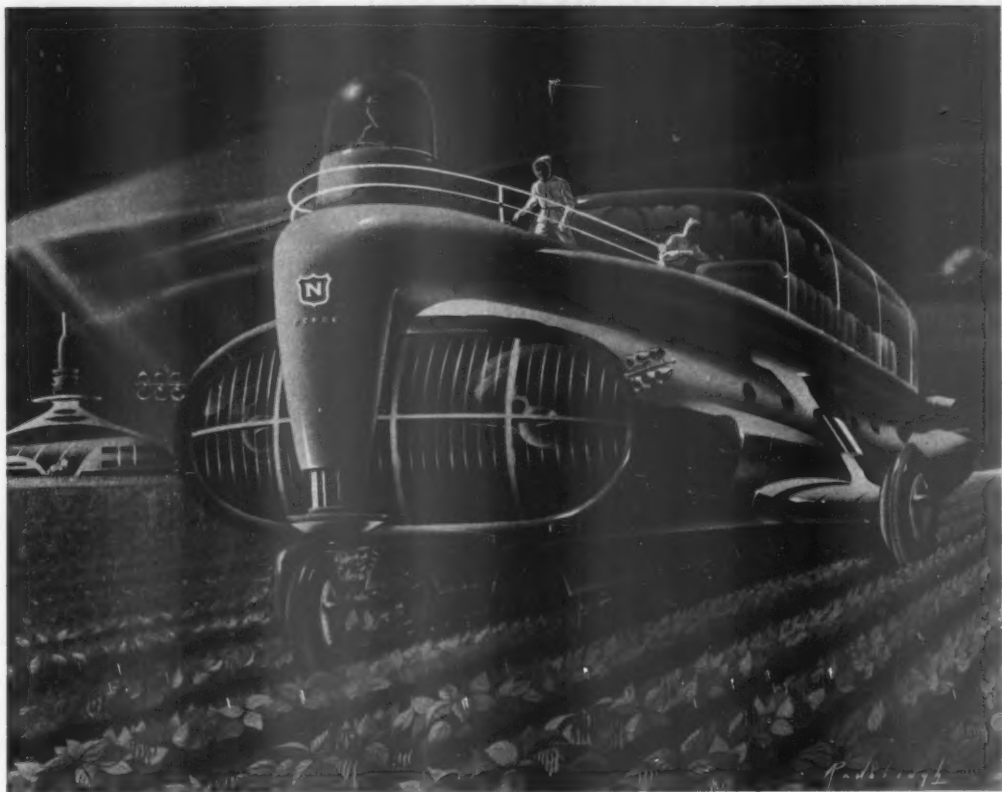
In reply to a request about Negro troops under his command in World War II, the General replied:

"To start with I would like to say this: that I do not differentiate among soldiers. I do not say white soldiers or Negro soldiers, and I do not say American or British soldiers."

### V. Collective Bargaining

On the subject of labor Eisenhower has commented many times, most notably at the CIO convention in Atlantic City in 1946 and at the American Bar Association convention in St. Louis in 1949. To the CIO he said:

"There is no need for me to expound upon the importance of American labor to our position before the world. Nor need I extol the benefits that have been brought to the American working people during recent decades by labor organizations. Men of my generation, familiar in their youth with the specter of



*When frozen food plants are put on wheels...*

## **National Oil Seals will protect the bearings**

Someday, perhaps frozen food plants will actually roll through the fields, capturing the fresh flavor of fruits and vegetables even more efficiently than now. Imagine the strain such ponderous equipment will put on bearings and other vital machine parts.

When that day comes, you can be sure National will be ready. Our engineers are continually researching and testing oil seals to match the imagination and daring of the most forward-thinking designers.

Because of this "years-ahead" research, National Oil Seals give "years-ahead" performance in your products of today. We welcome tough sealing problems. If you have one, won't you call on us?

### **NATIONAL MOTOR BEARING CO., INC.**

GENERAL OFFICES: Redwood City, Calif. • SALES OFFICES: Buffalo; Chicago; Cleveland; Dallas; Detroit; Milwaukee; New York City; Philadelphia; Springfield, Mass.; Syracuse; Wichita. • PLANTS: Redwood City, Calif.; Downey (Los Angeles County), Calif.; Van Wert, Ohio.

3372

### **DO YOU OPERATE HEAVY EQUIPMENT?**

Where big earth movers, farm implements and tractors operate, the efficient performance of oil seals is of extreme importance. Once an oil seal has been "seated-in" to the shaft it is extremely difficult, after removal, to replace it in exactly the same position on the shaft. That's why new ones should be installed on every repair, lube or overhaul job. Equipment makers recommend it. National Oil Seals are available for all leading makes of cars, trucks, buses, tractors and implements. They are available throughout the nation from automotive parts and bearing distributors.



**NATIONAL**  
OIL AND FLUID SEALS

Original equipment for all cars, trucks, buses and tractors — in fact, wherever shafts turn.

ENGINEERS RATE MODINE THE STANDARD OF EXCELLENCE

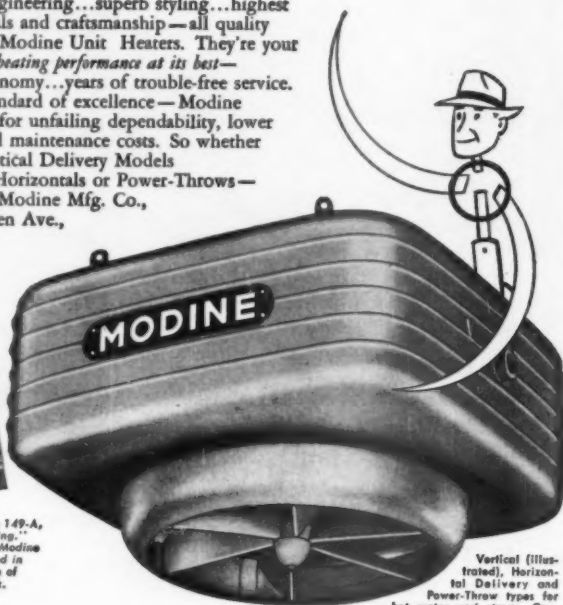
# COMPARE

YOU'LL CHOOSE *Modine*  
UNIT HEATERS EVERY TIME

Advanced engineering...superb styling...highest grade materials and craftsmanship—all quality hallmarks of Modine Unit Heaters. They're your assurance of heating performance at its best—high fuel economy...years of trouble-free service. Built to a standard of excellence—Modine is the choice for unfailing dependability, lower operation and maintenance costs. So whether you need Vertical Delivery Models (illustrated), Horizontals or Power-Throws—compare first! Modine Mfg. Co., 1508 DeKoven Ave., Racine, Wis.



Write for Bulletin 149-A, "Modine Unit Heating." Or contact your Modine representative listed in the classified section of your phone book.

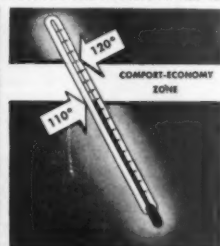


Vertical (illustrated), Horizontal Delivery and Power-Throw types for hot water and steam. Gas-fired units also available.

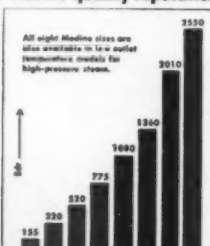
Three of many outstanding features that account for the Modine quality reputation



Sound-silencing features assure quieter operation—certified by accurate laboratory sound ratings. Especially important for commercial and institutional use.



Discharge air temperature of 110°-120° F. are correctly related to air velocities. Your assurance of perfect heating comfort... plus lower fuel costs.



Big Modine Vertical Units for big defense plants eliminate expensive duct-work, retain the flexibility necessary for subsequent changes in plant layout.

**Modine UNIT HEATERS**

insecurity that haunted many a family whose meager shelter and clothing and food depended on the father's prolonged hours of toil and sometimes miserably small pay, are living witnesses as to what has been accomplished. My own work week during the year before I entered the Army in 1911 was 84 hours."

The need for labor and management to see their common interest in production to solve their own problems is a frequent Eisenhower theme.

But the way to achieve this, according to Eisenhower, is across the bargaining table, not in Washington. In his ABA speech in St. Louis he explained:

"No arbitrary or imposed device will work. Bureaucratic plans enforced on both parties by government, pave the road to despotism."

## VI. Strong Internationalist

In questions of foreign policy his general views are better known. He is:

- A believer in collective security against world communism.
- Strongly anti-isolationist.
- A supporter of the United Nations.

• Advocate of a United Europe and of a European Army.

- Against a preventive war.
- In favor of military preparedness including Universal Military Training.

Eisenhower is obviously concerned with the cost to this country of the military and economic programs now in progress to halt Communist expansion around the world. In connection with American participation in NATO, Eisenhower told the members of Congress in February, 1951:

"Our system must remain solvent as we attempt a solution of this great problem of security. Else we have lost the battle from within that we are trying to win from without. I do not believe, for example, that the United States can pick up the world on its economic, financial, and military shoulders and carry it. We must have cooperation if we are to work with other nations."

On the role of the United States in NATO, Eisenhower said in Pittsburgh in 1950:

"The large-scale permanent commitment of American troops to relatively fixed defensive positions outside the continental limits would be costly beyond military return... Our own job is production and the ability to move strong units and destructive power quickly over long distances."

These are the bare bones of Eisenhower's political philosophy. So far his record marks a direction rather than a series of positions on specific issues. But he has said enough to permit an expansion into a full platform that probably wouldn't be full of surprises.





## HOW BLH ENGINEERING

SMOOTHING

## THE PATHS OF PROGRESS

On America's roadways—as well as on her railways—imaginative engineering by Baldwin-Lima-Hamilton serves you and the nation every day in the year.

Typical is a unique power grader made by Austin-Western, subsidiary of Baldwin-Lima-Hamilton.

In summer, this powerful four-wheel drive road machine "hogs" out roads and faultlessly finishes the slopes and ditches beside them . . . or reforms surface contours to block the loss of vital top soil. Then, in winter, it is transformed into a super-efficient snow fighter that plows and blows hazardous snow and ice as much as 150 feet away from the highway.

Its versatility, as well as that of other B-L-H construction equipment, comes from the fact that we have pioneered with road builders since the

day of the horse-drawn scraper—know their requirements intimately. Just as we have matured with dozens of other industries and, in the process, created complex, advanced tools to counteract increasing production costs.

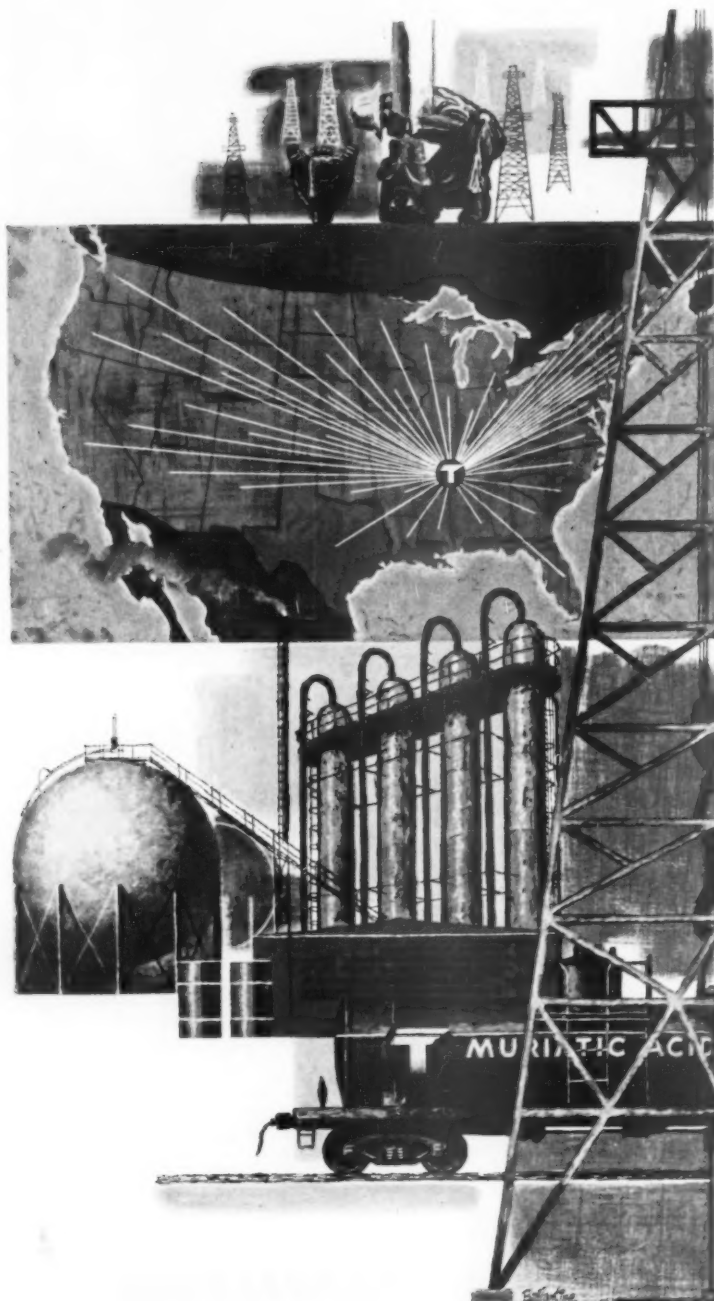
Whether you are interested in power graders, street sweepers, road rollers, cranes, shovels, draglines or rock crushing equipment . . . or diesel engines . . . locomotives . . . dump cars . . . hydraulic turbines . . . machine tools . . . testing equipment . . . any of dozens of other products—you'll find B-L-H engineering has incorporated features and efficiencies that will give you a better return on your investment.

For a more complete picture of the diversified B-L-H line, send for our new booklet, "The Story of Baldwin-Lima-Hamilton."

BALDWIN-LIMA-HAMILTON CORPORATION  
Philadelphia 42, Pa. • Offices in Principal Cities

# BALDWIN-LIMA-HAMILTON

# THERE'S A TOUCH OF **TENNESSEE** IN **TEXAS** OIL



Oil has brought great wealth to the Lone Star State, to Oklahoma, Pennsylvania, Illinois, Louisiana, California, and other oil producing states. Products from Tennessee are important to the oil industry wherever it is... Tennessee's Muriatic Acid for acidizing the wells, pig iron and ferro alloys for hard drill bits, strong derricks, tank cars and durable pipe.

Many other products from Tennessee are used by Texas industries... Acetic Acid for photographic and bleaching processes... Benzene Hexachloride for pesticides to protect cotton crops... Sodium Benzoate as a preservative. In fact, Tennessee's products are used by key industries in every state in the union. That's why Tennessee is known from Coast to Coast as an industry serving all industry.



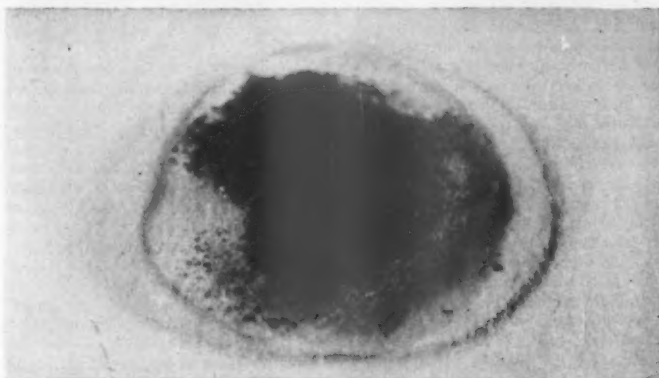
**TENNESSEE**  
**PRODUCTS & CHEMICAL**

*Corporation*

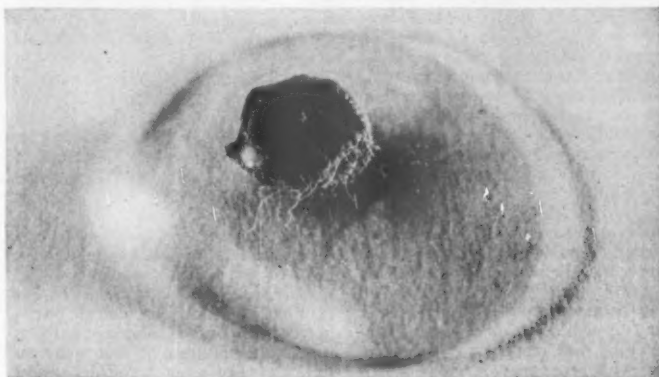
NASHVILLE, TENNESSEE

Producers of: FUELS • METALLURGICAL  
PRODUCTS • TENSULATE BUILDING  
PRODUCTS • AROMATIC CHEMICALS  
WOOD CHEMICALS • AGRICULTURAL  
CHEMICALS

## RESEARCH



UNTREATED SOIL, after wetting, gets crusty, cuts off air supply to roots. When . . .



KRILIUM TREATED, it remains porous and workable, resists erosion.

## Science Goes Farming

Farmers pricked up their ears, but they weren't too surprised when Monsanto Chemical Co. announced that it had a new soil conditioner, Krilium, that might increase crop yield by as much as 45%. They've come to expect a steady stream of miracle chemicals from the laboratories.

Most of them are familiar with weed killers like 2,4-D. They know that by using 2,4-D or naphthalene sprays they can keep fruit from dropping to the ground before it's ready to be picked. They know that by spraying only parts of their fields at one time harvesting can be staggered, so they no longer have to flood the market with fruits all at once.

These are only a few examples of how the chemist is helping the farmer. Even more new chemicals are being

introduced to agriculture: (1) in soil conditioning through use of both nutrients (fertilizers) and nonnutrients; (2) as herbicides, or weed killers; and (3) as pesticides, which are poisons used against insects and diseases.

• **Soil Glue**—The first field of development, and the area that may well be the most revolutionary to plant growth, is the field of soil conditioning. Fertilizers have long been used as nutrients to condition the soil and increase the yield, but Monsanto's nonnutrient may turn out to be an even greater aid. Krilium is a synthetic resin (hydrolyzed polyacrylonitrile) that acts as a sort of glue to hold the tiny particles of soil together. Monsanto says that, while Krilium isn't a fertilizer, 1 lb. of the chemical has the same impact on soil structure as 200 lb. of peat



**CUT DOLLARS  
from Your  
CLEANING  
COSTS  
with**

**TORNADO®**



Tornado reduces your cleaning costs in the face of other rising operating expenses.

Quick and thorough cleaning of plant or office interiors improves efficiency, reduces fire and accident hazards. Regular cleaning of machinery and fixtures adds years to their operating life.

All of your cleaning operations can be done with the Tornado vacuum cleaner. It's a 3 in 1 cleaner that serves as a:

**Tank Type Cleaner**—with a more powerful one stroke pickup of water, machine oil, metal chips, dirt and debris. Complete attachments for all types of cleaning.

**Pack-Carried Vacuum Cleaner**—just remove the motor unit from the top of the tank, connect Pac-Vac attachments, and you're ready to clean storage bins, stairways, overhead fixtures and hard-to-get-at places.

**High Velocity Portable Blower**—the same motor unit with a nozzle adaptor provides a powerful blast of dry air that cleans lint, dirt and oily fuzz out of electric motors, bearings, machinery and hard-to-reach areas.

Yes, you get all three—in one versatile Tornado Vacuum Cleaner. For detailed information write for bulletin 600.

**BREUER ELECTRIC MFG. CO.**

5104 N. Ravenswood Ave., Chicago 40, Ill.



## DUNHAM VACUUM PUMPS keep steam circulation UP ... fuel costs DOWN

You get more value from heating dollars with Dunham Vacuum Pumps in your steam lines. They easily produce...and maintain...vacuums as high as 26 inches—assure rapid, efficient steam circulation... shorten "heating up" periods.

For full information about these low-maintenance, ready-to-operate pumps—WRITE FOR BULLETIN 1401-7.

C. A. DUNHAM COMPANY,  
400 W. Madison St., Chicago 6, Ill.  
In Canada:  
C. A. Dunham Co., Ltd., Toronto  
In England:  
C. A. Dunham Co., Ltd., London

# DUNHAM

heating systems and equipment

moss or 500 lb. of commercial compost.

Actually, soil structure is the arrangement of the tiny particles of soil into what are called aggregates. In its best condition, soil should be porous and loose. It's possible to prepare soil this way mechanically, but it's almost impossible to keep it this way during and after heavy rainfall. What happens is that, after rain, soil with poor structure slakes down to a crusty smooth surface. At the same time, the smaller particles work themselves down and make it hard for air to get at the roots of the plant. Krilium corrects all this, says Monsanto, and maintains the soil structure over a long period of time, perhaps 10 times longer than with natural organic matter.

• **New Storage System**—With Krilium-treated soil, more water filters down for storage in the subsoil. At the same time, the soil holds the water against evaporation, and you have increased soil workability. This means a big increase in plant yield—anywhere from 20% to 45%, Monsanto's initial experiments show.

Another striking result from using Krilium is the soil's resistance to erosion. Land won't wash away after long and continuous downpours. Freshly worked land will "hold" until vegetation develops. At a rate of 40 lb. per acre, Krilium treatment is equivalent to straw mulching at the rate of 2 tons to 4 tons per acre. What's more, it can't blow away or catch fire as straw can. Highway commissions will be able to save costs of expensive grass seed, because they'll be assured their first crop will come up, and the highway bank will remain free from erosion while the grass is growing. In other nonagricultural uses, Krilium will be a boon: Football fields and tennis courts won't become water logged or hard-packed with mud.

• **Weed Killers**—Among the tried and proved chemicals, probably the most phenomenal progress has been made in the field of herbicides. Dr. Robert Salter, chief of the Dept. of Agriculture's Soil Conservation Service, says that developments with herbicides have "gone far beyond the imagination of the most fantastic dreamer of only 10 years ago." In 1945 herbicides were hardly used. In 1949 more than 28-million lb. of 2,4-D alone were produced. Just by destroying weeds with 2,4-D, Canadian farmers in 1949 increased wheat yield by 21-million bu. on 6-million acres. Iowans increased corn production 15%. Agriculture Dept. specialists estimate that in 1950 farmers applied herbicides to more than 30-million acres of crop land in the U.S.

• **Nonfarm Uses**—But besides knocking the dandelions, ragweed, and crabgrass out of crop land, herbicides are

being used more and more on noncrop land. Railroad rights-of-way, power lines, transmission lines, highways, and canal ditches can all be kept clean with herbicides like 2,4-D; 2,4,5-T; TCA; chlorates; arsenicals; and boron compounds.

Coming up on the horizon are what the experts call pre-emergence herbicides. These chemicals kill the weed seedling during its process of germination. The chemical is applied on the surface of the soil after the crop has been planted, but before the seedlings come up. The seedlings of some crops will grow right through the stuff, but when the broad-leaved weeds and annual grasses start up they are killed before they reach the surface. Result: not a weed in sight for several weeks after planting. Cotton growers are latching on to these pre-emergence sprays to offset the shortage of labor for hand-hoeing.

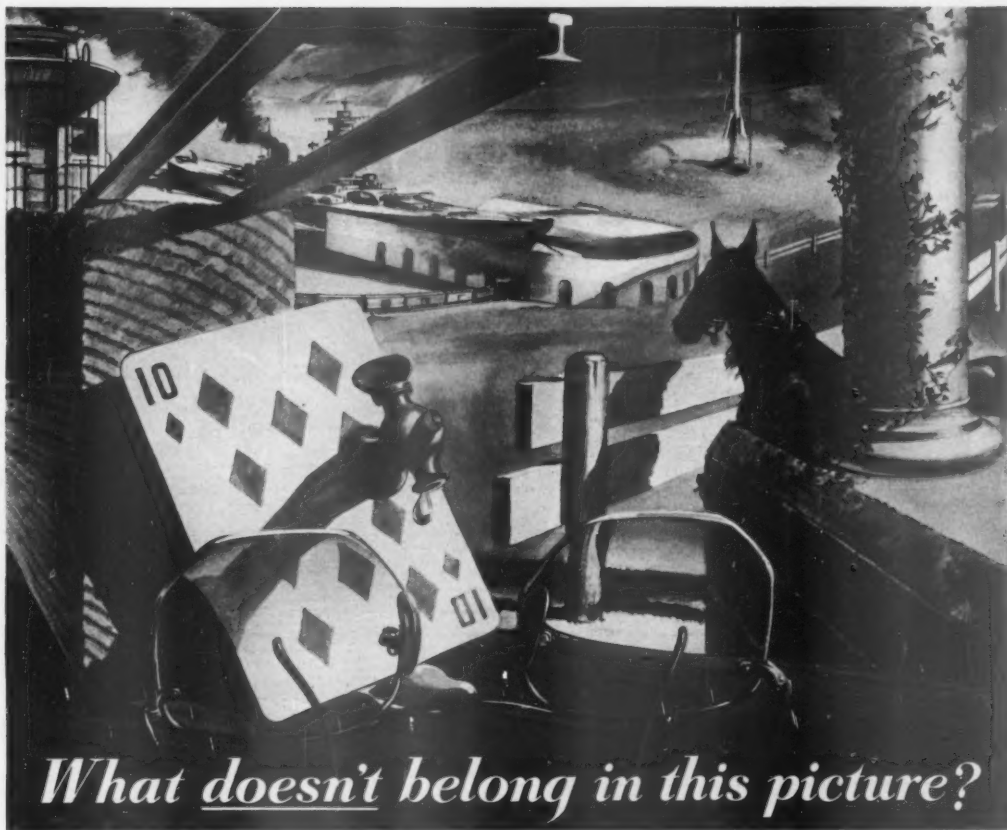
One point about herbicides, however, is that you have to be careful how you use them. Du Pont's new CMU is a good example. When used at rates of 20 lb. to 80 lb. per acre, it kills all plant life for more than a year. This is fine for railroad yards, but bad for asparagus beds. But when used at the rate of ½ lb. to 5 lb. per acre, as a pre-emergence treatment, it will kill all the weeds in the asparagus bed without harming those precious stalks.

• **Death to Bugs**—Like herbicides, pesticides have to be handled carefully in order to get results. Sometimes a particular insect killer backfires. DDT, for example, does not wipe out all bugs—in fact, some bugs develop immunity to it. Another problem is that some insecticides, like some herbicides, prove poisonous to humans and animals. Compounds containing phosphorus have proved excellent killers of bugs such as aphids, where DDT is ineffective, but these compounds, unless carefully used, are poisonous to men.

However, profitable progress has been made with fungicides, a specific used to attack fungi, mildews, rusts, molds, and rots that live on or in plants. Recent discovery of complex organic materials like dithio carbamates, phenyl mercury compounds, etc., is helping to eliminate these diseases.

• **New Genus of Plants**—The Dept. of Agriculture feels that the surface has only just been scratched in developing new compounds. Its experts say there are thousands more waiting to be tested, and many of the chemicals will be used not as insecticides alone, but to modify plant growth form and plant structure. The probability is that in the future many fertilizers will, in themselves, make plants less susceptible to insects and disease.





## *What doesn't belong in this picture?*

All but one of the objects in this picture have something in common. Norton or Behr-Manning abrasive products are vital factors in their manufacture and in their quality. *Can you find the stranger?*

**The V-2 Rocket?** No! Every one of its components—even the fuel that propels it—was manufactured with the aid of Norton and Behr-Manning abrasive products. That applies, also, to its cargo—whether peacetime recording instruments or wartime explosives.

**The wooden fence?** No! The axes and saws required to make it were sharpened by Norton grinding wheels and Norton abrasive sharpening stones. Other products made of wood depend on Behr-Manning coated abrasive discs and belts for fine finishes.

**The spectacles?** No! Norton refractories aid in the making of glass, and lenses are precision ground with Norton abrasives.

**The horse?** No! His hooves are protected by iron shoes, rough ground with Behr-Manning coated abrasive belts.

**Neither is it the drop of water.** That was purified at the filtration plant by Norton porous plates.

**The stranger in the picture** is the ivy on the pillar. Remember, any man-made product...whether of metal, wood, paper, cloth, leather, ceramics or plastics...depends in some important way on abrasives, abrasive products, refractories, or grinding machines that bear such well-known trade-marks as Norton and Behr-Manning...world's largest manufacturers of abrasives and abrasive products.

**NORTON**

*Making better products to make other products better*



**NORTON COMPANY**

MAIN OFFICE AND WORKS WORCESTER 5, MASSACHUSETTS

ABRASIVES • GRINDING WHEELS • REFRACTORIES  
NORSIDE GRAIN AND MOLDED PRODUCTS  
GRINDING AND LAPPING MACHINES • NON-SLIP FLOORS

**BEHR-MANNING**

DIVISION OF NORTON COMPANY TROY, NEW YORK

ABRASIVE PAPER AND CLOTH • OILSTONES  
ABRASIVE SPECIALTIES  
BEHR-CAT BRAND PRESSURE-SENSITIVE TAPES

SOLD BY LEADING DISTRIBUTORS AND DEALERS THE WORLD OVER

# "HOW WE USING COAL

Louis G. Nette,  
Chief Power Engineer,  
Little Falls Laundry,  
Little Falls, N. J.



To this great modern plant in Little Falls, N. J., 500 employees come every day to take care of the laundry for an estimated 100,000 people. And from this plant 100 trucks travel to customers spread across a 5,000 square-mile area! The laundry can be called completely self-sufficient. It depends on coal to provide all electric power and lights—heat for all buildings—steam for hydraulically-operated machines—steam for pressers and dryers.

**If you're running your own steam plant, here are a few down-to-earth facts you don't want to miss!**

**COAL** in most places, is today's most economical fuel.

**COAL** resources in America are adequate for all needs—for hundreds of years to come.

**COAL** production in the U.S.A. is highly mechanized and by far the most efficient in the world.

**COAL** prices will therefore remain the most stable of all fuels.

**COAL** is the safest fuel to store and use.

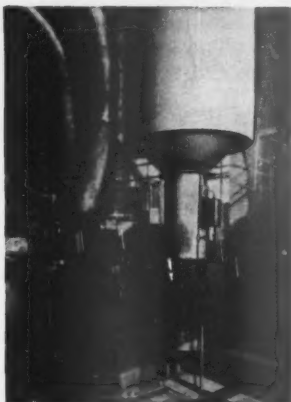
**COAL** is the fuel that American industry can count on more and more—for with modern combustion-and-handling equipment, the inherent advantages of well-prepared coal net even bigger savings.

FOR RENT  
FOR SALE

# SAVE \$20,000 A YEAR— INSTEAD OF OIL"

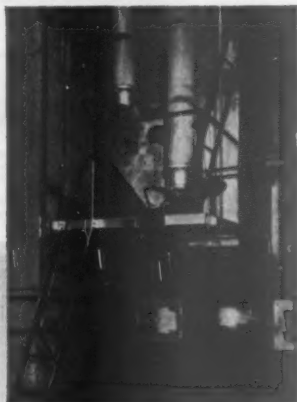
## (ACTUAL CASE HISTORY OF THE LITTLE FALLS LAUNDRY, LITTLE FALLS, N.J.)

"Our laundry is one of the largest in the country," says Chief Power Plant Engineer Notté, "and, we think, one of the most progressive. Our company insists on superior performance at lowest possible cost all along the line. That's exactly why we depend on coal-fired equipment. From coal we get the daily amount of BTU's we need at a cost of \$200—to get the same BTU's from oil would cost \$280. We can change to oil on less than a day's notice—but so far we've *never* done it. Coal does a great job—cheaper."



◆ This is the company's up-to-date pulverizer from which the ground coal is blown into the boiler. Before this final operation, the laundry employs a steel-slatted conveyor belt to feed a precrusher. From there, power-driven bucket-conveyors carry the coal to the 100-ton storage hopper which feeds the pulverizer. Modern automatic coal devices of all kinds slash labor costs—make coal's basic economy even greater.

◆ This is a section of the laundry's modern coal-fired boiler installation. With modern equipment like this it is possible to add anywhere from 10% to 40% to the power derived from the same amount of coal in years past. Actually with coal-fired plants of up-to-date design many companies have brought over-all boiler efficiency up to 85% or more.



● Plants that use coal are in an enviable position—at the present *and* for the future. *For they are more certain than the users of other fuels of a dependable fuel supply—at stable prices.* The reasons are compelling. Of America's total fuel reserves, 92% is coal: Even today, oil is *imported* while this country can and does *export* coal. In addition—this country's mines are the most highly mechanized and efficient in the world.

To get *all* the great economy that coal can deliver—to find out how much more efficient and

dependable a job coal and the very latest coal-fired equipment can do—call in a competent consulting engineer. He'll recommend the right equipment for your specific needs. Then you'll see exactly why coal *on a performance basis, on a dollars-and-cents basis . . .* is your best fuel buy, by far!

**BITUMINOUS COAL INSTITUTE**  
A DEPARTMENT OF NATIONAL COAL ASSOCIATION  
**WASHINGTON, D. C.**



NATIONAL

PACKAGING

EXPOSITION

## PACKAGING • PACKING MATERIALS HANDLING

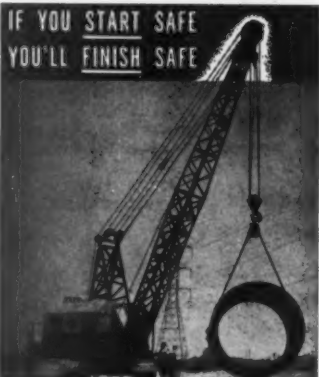
See the greatest array of machines, equipment, and materials for packaging and packing ever shown anywhere—plus spectacular materials handling exhibits. Inspect and compare the products of 300 leading companies, occupying both levels of the giant Atlantic City Auditorium—4 acres of exhibits designed to cut costs, boost your profits!

**New!** Dramatic demonstrations of the newest loading and unloading techniques for railroad cars and highway trucks... continuously during show hours in a specially constructed outdoor theater!

**APRIL 1-2-3-4**  
PUBLIC AUDITORIUM  
ATLANTIC CITY

For information about the exposition and concurrent conferences... address the American Management Association, 330 West 42nd Street, New York 36.

**American Management Association**

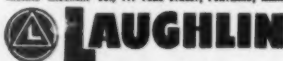


**IF YOU START SAFE  
YOU'LL FINISH SAFE**

No load that is moved or secured with wire rope or chain is safe unless the fittings are right for the job. Laughlin fittings are drop forged for strength and designed to give a big extra margin of working safety that prevents accidents, cuts repair costs and keeps insurance rates down.

Replacing under-strength equipment with Laughlin fittings is always good sense—but it's better business to install them first. The Laughlin trademark means top quality. For safety's sake, look for it on all wire rope and chain fittings. Catalog No. 150 lists complete line.

THOMAS LAUGHLIN CO., 117 FINE STREET, PORTLAND, MAINE



**OUTSIDE** Asbestos-like panels form the solid walls of Wm. S. Merrell's new research lab. An explosion would blow panels away, send gases outward.

## Drug Company's New Lab Takes Bang Out of Explosions

If you are doing experimental work in chemistry, you can't keep from having minor explosions once in a while. But if you set up your laboratory right, you can keep the explosions from killing people and wrecking valuable equipment.

Wm. S. Merrell Co., of Cincinnati, put explosion control at the top of its list when it set out to design its new organic research laboratory. As a result, it has what it thinks is the last word in safe design.

• **Volatile Chemicals**—Merrell—one of the oldest pharmaceutical houses in the U. S.—is using the new building to house its research in new drugs. Bently hydrochloride (for gastro-intestinal therapy), cepcryn chloride (used in Cepacol), and decapryn (an antihistamine) are now being produced there. Since many of the chemicals that go into these products are highly volatile, one explosion could set off a series.

Merrell's safety planning began with the design of the building. A set of outer walls, made of ½-in.-thick asbestos-like paneling, are so constructed that the blast of an explosion would immediately push the panels loose. Inner walls are solid, protecting one part of the drug production area from another.

Inside the building all electrical wire and fixtures are enclosed in explosionproof steel on ½-in.-thick glass, to prevent electric sparks from starting

fires or explosions. Even the floors are made of cement that won't spark if a worker happens to drop a piece of metal.

• **Separated**—All 12 of the completely equipped drug production booths in the U-shaped lab are isolated from Merrell's main building—although no booth is more than 30 ft. away. A concrete wall and heavy steel fire doors separate the lab and main building.

The production booths are divided into two parallel wings of six cubicles each. If an explosion occurs in one wing, production can continue in the other. Each booth is equipped with every service needed for drug preparation: steam, compressed air, vacuum, distilled water, and electricity.

• **Air Blanket**—Special equipment seals the entrance to each booth with a blanket of filtered, temperature-controlled air, and circulates more than 1.2-million cu. ft.—42 tons—of air every hour through the drug production area. The air sweeps away explosive vapors and prevents cross-contamination of chemicals from one booth to another. Automatically operated dampers supply air to each cubicle.

Emergency showers are set up so that a man need only stand on a special foot pedal or pull a hanging chain to be deluged with water. Another feature is an eye-wash fountain that operates like a drinking fountain.





**INSIDE** Air-circulating equipment in booths makes it impossible for gases from one booth to enter another, reduces cross-contamination of chemicals.



**Oops—there goes the sausage!** But never fear, that package is securely wrapped in Rhinelander Greaseproof. And speaking of packages, we'll bet you didn't know that literally hundreds of fine food products in your favorite grocery or super market are wrapped in these miracle-working papers.

## Paper that Gets Around

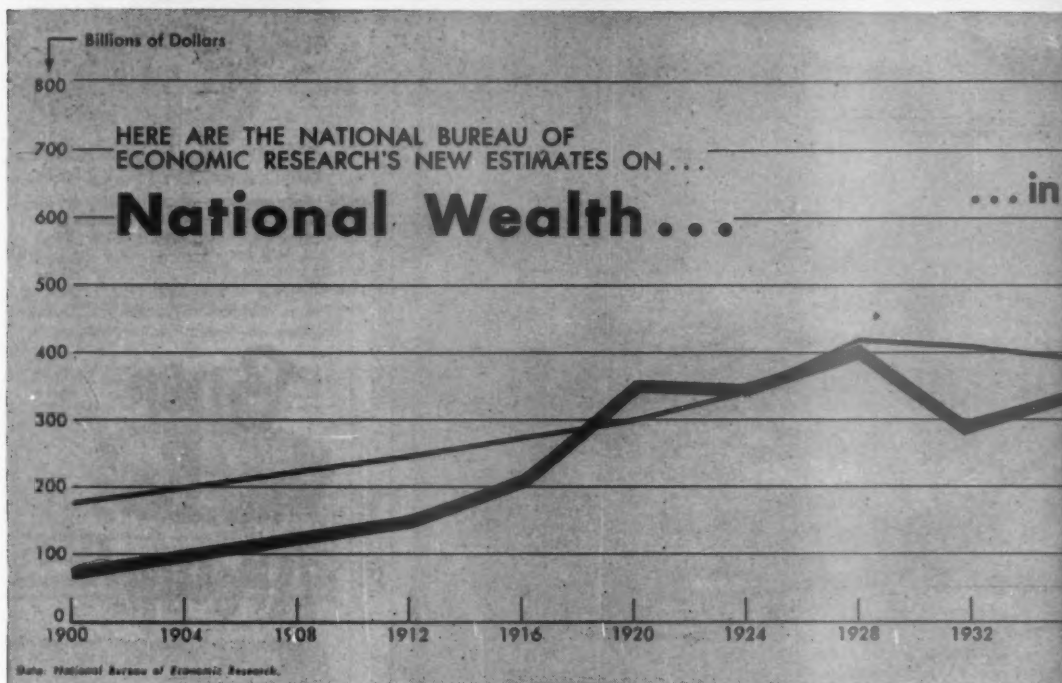


**Time out for coffee and**—a relish-laden hamburger all dressed up to go in grease resisting Rhinelander G & G.\* Sanitary and economical, these fine papers are doing yeoman duty guarding America's favorite snack dish at customer-conscious drive-ins, truckers' stops or just plain hamburger stands.

\*G & G—the functional Rhinelander papers that serve all America in hundreds of ways.

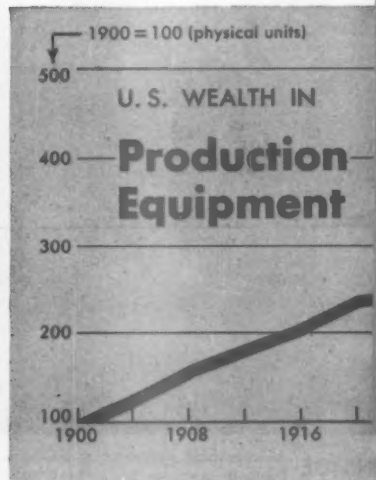


# ECONOMICS



## How Much Is the United States

(Story starts on page 116)



in actual dollars  
... in 1929 dollars

1936 1940 1944 1948

Worth?

(116)

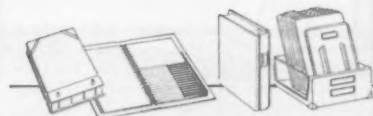
1924 1932 1940 1948



## NEW LOW COST

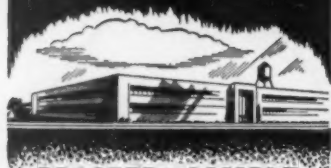
Makes these STRONGLEAF Sheets a Practical  
Necessity for all Ring Book Users  
NOW only \$1.35 per 100 sheets

Here are ring book sheets *already reinforced* against ripping at those vulnerable ring holes — and at a cost that every office manager is delighted to hear about. It's practical now to protect *all* your notes and records from loss — or from just plain "wearing out". For this low price you are also getting National's famous, cool-green EYE-EASE® paper. National's STRONGLEAF reinforcements on National's EYE-EASE paper make a sheet that is stronger in the binder and easier on the eyes. There is an unbeatable combination to promote accuracy and efficiency in your office.



MAKERS OF STOCK ACCOUNTING FORMS AND EQUIPMENT—LOOSE LEAF, BOUND BOOK AND VISIBLE

Industry discovers  
*"the Land  
the Lord  
Remembered"*



## PROCTER & GAMBLE builds in SACRAMENTO

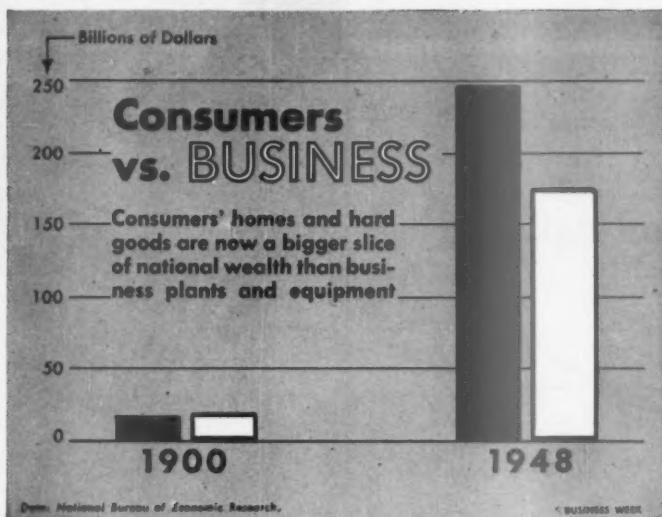
Procter & Gamble's selection of Sacramento for its newest California plant emphasizes the advantages of this Heartland area. Count them against your requirements: abundant land, power, and water . . . room to grow . . . markets to grow on. 19,000,000 people in fast-growing Western markets are at your Sacramento doorstep.

This Heartland area offers production advantages as well. It provides a strategic location for *decentralized* operation. Its mild climate invites the use of modern 1-story plants, with significant savings in construction and operating costs. *The sun is on your payroll*, and living is good. That basic fact is reflected in the acknowledged efficiency of the labor force, and in an extraordinary record in labor-management cooperation.

**WRITE FOR THIS BOOKLET.** To measure the Heartland against your needs, we've provided this informative, 16-page booklet, "The Land the Lord Remembered". Write our Industrial Dept., Room 306, for your free copy. All inquiries handled in strictest confidence.



(Economics starts on page 114)



## New Owners, New Forms

About 325 years ago Peter Minuit bought Manhattan island, choicest piece of real estate in America, for \$24 worth of trinkets.

Ever since that time the U.S. has steadily—and rapidly—been getting more valuable. But by how much, and in what areas, nobody up to now has been quite sure.

In a study released by the National Bureau of Economic Research, economist Raymond W. Goldsmith makes the most detailed estimates so far of just how much the U.S. is worth—now and at four-year intervals all the way back to 1896.

• **It Grew Back**—In 1896, Goldsmith figures, the national wealth was \$63.8-billion. In 1948 the value had jumped to \$797-billion—12½ times as much as 52 years before. In dollar terms that's a staggering increase for only half a century. But there's one trouble: Two-thirds of the gain represents nothing more than the depreciation of the dollar.

If you shift from a changing dollar to a constant dollar, the results, while substantial, are not quite so impressive. In 1929 dollars, the jump would be from \$164.2-billion in 1896 to \$461.8-billion—less than three times as much—in 1948.

Probably the biggest contribution since 1900 to this gain in national wealth was made during the five-year period just ended: Between 1946 and 1950 the total rose about 5% a year.

• **Shifting Ground**—Every bit as important as the change in the total of

national wealth, however, has been the change in its composition:

• As the U.S. moved from an agricultural to an industrial economy, land became relatively less important as a form of wealth. At the beginning of the century—and even as late as 1916—land accounted for one-third of all wealth. In 1948 it was less than one-fifth.

• Business wealth, which was about one-third greater than consumer wealth in 1900, was less than consumers' holdings by 1948.

• Federal, state, and local government holdings rose from 8% to around 15% of the total.

• Private net foreign investment of Americans (American holdings overseas minus foreign holdings in the U.S.) now comes to about 2% of the total. In 1900 the balance was on the foreigners' side; their investment in the U.S., minus ours overseas, was equal to about 3% of the national wealth.

• **What's Wealth?**—In order to figure out how much the U.S. is worth, it is first necessary to determine just what is to be counted. Some things that are essentially "wealth" have to be left out because of the difficulty or sheer impossibility of collecting worth-while data. Goldsmith's figures, for that reason, do not include consumers' holdings of perishable and semidurable commodities, works of art, military assets, land improvement costs, soil depletion, or subsoil assets such as oil or coal.

The wealth that is counted is all tangible. It is broken into two parts:



# They did

A certain paper manufacturer\* has used a procedure worth noting by every industrial executive who wants to produce more. He had the two-way problem of boosting production and simultaneously cutting costs on his paper-making machine.

## what

Our paper manufacturer got at the project by asking Westinghouse engineers to attack it as a total problem . . . not just as a quotation on an electrical device. His staff and ours applied an auxiliary drive using several devices — motors, controls, speed reducers and d-c generators — to let him produce more with his same basic physical facilities. Results: more production from felts, improved quality, and savings of \$30,000 the first year.

## you can do

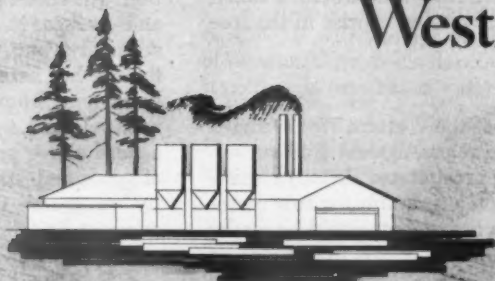
His story should be important to a steel man or a transportation man; for every industry and every manufacturing process. For it shows that it takes capacity planning to solve capacity problems. And we want to do that kind of planning with you and your engineers.

## to produce more

The actual choice of devices can wait until later. It's how you put them together that counts . . . whether furnaces, thermostats, small motors or circuit breakers. Many manufacturers make good electrical devices. Westinghouse, in fact, makes a broader line than anyone else. But the priceless ingredient Westinghouse offers you, in addition, is the skill of broadly experienced engineers in putting together the right combination of good devices to let you produce more with what you have. Westinghouse Electric Corporation, Pittsburgh, Penna.

\* name on request

YOU CAN BE SURE...IF IT'S  
**Westinghouse**



# HOW TO HELP BRITAIN ...and Ourselves

The purpose of this editorial is to help Winston Churchill obtain the aid Britain needs

- (1) to weather her present financial crisis, and
- (2) to avoid a chronic recurrence of such crises.

This is not a philanthropic purpose.

Britain is our staunchest ally in the free world's continuing fight for survival. She cannot perform her role effectively if she is broke, or if she careens from one financial crisis to another.

Then, too, a nation such as ours—committed to private enterprise as a way of economic life—has a special interest in helping Winston Churchill to help Britain. His administration is relatively friendly toward private enterprise. Should he fail, he would be replaced promptly by a Socialist government more hostile than ever. And that would weaken the standing of private enterprise in the free world.

## Cause of the Crisis

It is the drive of the Western World under our leadership to rearm against Russian aggression that has precipitated Britain's financial crisis. It set off a scramble for raw materials from which armaments could be made, and for many other materials that might be

short in the event of war. So the prices of the things that Britain must import—mostly raw materials—have been boosted more than the prices of things she can export—mostly finished products. That leaves Britain short of funds to pay for essential imports. This difficulty increases as the necessity becomes more urgent to divert industrial effort from production for export to production for security.

## The Basic Trouble

Although Britain's immediate crisis was touched off by the rearmament drive of the Western World, her basic affliction is one from which she has suffered since the end of World War II. Stated in its simplest terms, Britain does not produce enough goods to pay her own way as one of the family of free nations.

For years this deficiency in home production was made up by income from shipping and overseas investment. But Britain had to sell a large part of her foreign investments to finance her heroic part in World War II. So her income from that source has been greatly reduced. And, in spite of an increase of about a third above prewar in her own production of goods and—thanks to a continued "austerity" program—a much larger increase in her exports, Britain still is not paying her own way.

---

## Two Ways to Solvency

Britain has two ways to restore her solvency. One is to cut down on what is consumed—the belt-tightening process. The other is to step up British production.

To surmount the present crisis, Mr. Churchill has asked for some cutting down. He probably must ask for more.

Except as a stop-gap expedient, however, more cutting down of Britain's consumption is clearly a dangerous course. That would further depress a British standard of living which, not more than half as high as ours, already is too low. Politically such a course would grease the skids for Winston Churchill's administration, even now governing by a wafer-thin parliamentary margin. Also, as *The (London) Economist* remarks, the "lazy expedient of cutting trade" would result in "hurting other people and forcing them to take similar action"—by cutting the market for their products.

## The Only Cure

The best and, in fact, the only way to help cure Britain's economic ills is to help Britain produce more. Here the technical possibilities are encouraging. On the average, the British industrial worker produces only about 40 percent as much a year as the American worker. That is a British estimate, made by Sir Ewart Smith.

Wider use of better industrial methods and modern tools and an infusion of the competitive incentive into British industry—to replace the cartel and other restrictive practices—would go a long way to narrow this wide gap in worker productivity. This is the consensus of experts on both sides of the Atlantic.

Since 1948 the Anglo-American Council on Productivity has done much to encourage output per man-hour in Britain and to foster this doctrine with both labor and management. But much yet remains to be done.

In the United States it is increasingly sug-

gested that before we give Britain any more economic aid we should insist that everything possible be done to exploit the technical possibilities of increased production. This emphasis on production is needed. But if we Americans were to impose upon the hard-pressed British people conditions that could be construed as an affront to a friendly and sovereign nation, we might well put into the hands of a masterful rabble-rouser such as Aneurin Bevan, the anti-American leader of the Labor Party's left wing, a campaign issue on which to maneuver himself into the Prime Ministership.

## Churchill Can Insist

But Winston Churchill is not so handicapped as we should be in imposing prerequisites of further aid. As Britain's own, most honored leader he will raise no touchy questions as to Anglo-American relations if he insists that Britain have firm plans to cure her economic ills, plans sharply focussed on ways and means of increasing Britain's industrial efficiency.

By presenting a convincing plan to cure Britain's recurring crises through greater production, Mr. Churchill will greatly facilitate the process of getting the aid his country must have. He will also remove an increasingly dangerous element of dissension in Anglo-American relations—the feeling of many Americans that more aid to Britain is more money down the drain. The way to counter that feeling is to come up with a prescription for an economic cure, not a request for another economic poultice.

Technically, such a program is entirely feasible. It will perhaps be the supreme test of Winston Churchill's statesmanship to make it politically feasible as well.

In the interest of Britain, of the United States and of the whole free world, we wish him all success.

**McGraw-Hill Publishing Company, Inc.**

---



## "EXCEPTIONAL REDUCTION IN COSTS" in coal stockpiling... at world's largest concrete mill

At their Alpena, Michigan, mill (annual production 6,000,000 barrels), Huron-Portland Cement Company uses their high-speed, rubber-tired C Tournadozer 16 hours a day, 7 days a week, to handle coal between stockpile and mill storage bins. Job production studies covering 9 months of operation show Tournadozer easily moves mill requirements of 1,000 tons a day... is constant producer in all kinds of weather... at 95% mechanical efficiency.

### Cut coal-handling costs

Use of mobile "C" to doze coal 50' to 300' has greatly simplified operations: eliminated tunnel handling... released one electric and one gas crane for other duties... eliminated use of two distributing belt conveyors and electric crane track... freed 3-man tunnel crew for other jobs in the giant mill.

### Completely pleased with performance

"We are completely pleased with the exceptional reduction in costs and the superior improvement of organizational efficiency the Tournadozer gives us," is the way Superintendent W. G. MacDonald puts it. Management of the Huron-Portland Cement Company is

also pleased with the reduced possibility of spontaneous combustion, due to the high compaction obtained by Tournadozer's giant rubber tires rolling over the coal surface.

### Shows all-around utility

In addition to handling 1,000 tons of coal a day, Tournadozer's ability to travel and work at high speeds pays off in extra assignments around the Huron-Portland mill. The versatile rubber-tired Dozer is used to clear snow, to do miscellaneous excavating, and, frequently, to push-load the company's Tournapull earthmover, which handles coal at the docks. Tournadozer also switches box cars and cleans up around tracks where its low-pressure tires cross over or work along tracks without damage to rails, ties, or the giant rubber tires of the Dozer.

*Can we help you, too?*

If you have coal stockpiling or earthmoving problems, see your LeTourneau Distributor or write us direct. We are always glad to analyze your problem and quote on new equipment or put you in touch with LeTourneau owners who will contract or rent equipment. All around the world these new, high-speed units are revolutionizing the movement of earth and other bulk materials. Check what they can do for you!



## NATIONAL WEALTH: A Breakdown

1900 1948  
(Billions of Dollars)

### STRUCTURES

Nonfarm		
Residential	\$13.2	\$158.9
Nonresidential	12.5	86.0
Mining (underground)	0.4	11.9
Farm	3.3	25.6
Institutional	1.1	9.2
Government	2.0	66.3

### EQUIPMENT

Producer durables	6.5	90.2
Consumer durables	6.0	88.5

### INVENTORIES

Private		
Livestock	3.1	14.7
Crop	1.4	7.5
Nonfarm	5.4	63.0
Public	0.0	2.1

GOLD & SILVER	1.7	27.6
---------------	-----	------

### LAND

Private		
Farm	13.1	45.2
Other	8.2	49.8
Forests	1.5	4.5
Public	4.0	30.0

NET FOREIGN ASSETS	-2.3	16.0
--------------------	------	------

**TOTAL \$81.1 \$797.0**

(1) reproducible assets—structures, durable equipment (both producer and consumer), and inventories; and (2) the nonreproducible assets—monetary gold and silver, and land.

• **Perpetual Inventory**—The method used in arriving at wealth estimates is what Goldsmith calls the "perpetual inventory of national wealth." Basically, the procedure is to cumulate depreciated capital expenditures, for everything except land, and then adjust for changes in cost or prices. Or to put it another way: At any given date an item is worth what it cost, less the amount of depreciation and obsolescence.

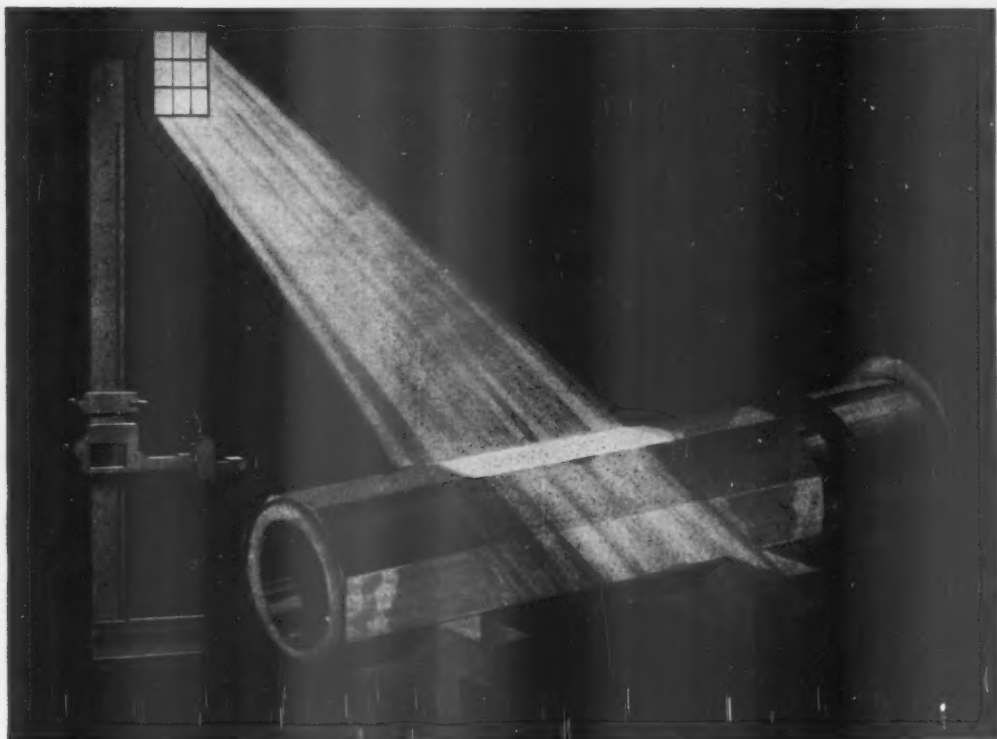
Thus, when a constant depreciation rate is figured out for every item or group of items, it becomes possible to tell what that item will be worth at any stage of its life. And when dollar inflation or deflation is accounted for, it becomes possible to compare any two items in any two years.

Anything that has an average life of less than six months is disregarded in figuring out the national wealth total—but this is a matter of convenience.

• **Drawbacks**—One big defect in the perpetual inventory method is the generality of the estimates. An average depreciation rate has to be figured out for an entire class of goods. For instance, commercial structures are given a constant depreciation rate of 2½% a year, highways 4%, office machinery 12½%, furnishings 10%. The difference between these assumed averages and the actual averages is a source for error.

Another hurdle is the changing value





## Beware the Vicious Sunbeam!

The poet calls dust particles "gay motes that people the sunbeam" . . . but what more practical people call these particles isn't fit to print.

Air-borne dust in almost any business—particularly a defense plant—is a constant threat . . . to precision, to people.

Suppose you're manufacturing electron tubes . . . dust can't be tolerated. Or operating an optical grinding department . . . glass dust, trapped in perspiration, is serious. Or handling

powder or plastics or precision instruments . . . you must control grit in the air.

Air conditioning does this . . . and controls the *temperature* and *humidity* that also affect product quality, speed of production, worker efficiency and morale.

For the type of air conditioning or refrigeration which will serve your needs best, call upon the manufacturer with the broadest industrial experience—Worthington. No other

manufacturer makes so complete a line . . . a Worthington system is Worthington-made, not just Worthington-assembled, assuring you of perfectly balanced operation and unit responsibility.

Write us for full information on why there's more worth in Worthington, or call local distributor (in Classified Telephone Book). Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, New Jersey.

A.I.49

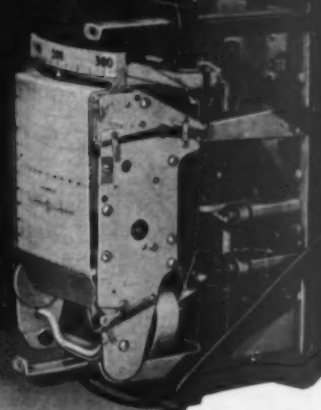
# WORTHINGTON



AIR CONDITIONING AND REFRIGERATION

THE MOST COMPLETE LINE . . . ALWAYS THE CORRECT RECOMMENDATION

Success stories of  
**CARBOLOY**  
CREATED-METALS



A CONCENTRIC-MAGNET element is the measuring mechanism of this new-type, portable current recorder, shown with cover removed. Because they possess lasting, higher energy, Carboloy Alnico permanent magnets in small sizes made possible a simplified element design . . . effected a 10-pound weight reduction in the recorder.

## Magnets . . . to make instruments behave

To detect an overloaded electric motor, or to accurately measure the output of a power station, recording instruments must be highly sensitive . . . yet able to resist outside disturbances.

To get utmost accuracy, many instruments use Carboloy Alnico permanent magnets in either the delicate moving-coil mechanism or the stationary coil. In the instrument above, Carboloy Alnico helps cut errors; makes savings in materials, weight and space.

Carboloy Alnico is just one of the Carboloy created-metals. Others include Cemented Carbides for cutting, forming, and wear resistance, plus the new Series 600 Chrome Carbides, especially for abrasion, corrosion and erosion resistance . . . and Carboloy Hevimet for maximum weight in minimum space, and for radioactive screening.

### MASTERS IN METALS

Do you need a created-metal to overcome a production stymie? Step up output? Or to solve a product-design problem, perhaps?

Then contact Carboloy engineers, today. They have at their

fingertips all available answers on these metals.

And look to Carboloy metal-lurgists, too, to bring you even broader fields of use for these and future Carboloy created-metals.

"Carboloy" is the trademark for the products of Carboloy Department of General Electric Company.

# CARBOLOY

DEPARTMENT OF GENERAL ELECTRIC COMPANY  
11183 E. 8 Mile Blvd., Detroit 32, Michigan

**CARBOLOY**  
CREATED-METALS

**ALNICO PERMANENT MAGNETS**  
for lasting magnetic energy

**CEMENTED CARBIDES**

for phenomenal cutting, forming, wear resistance

**HEVIMET** for maximum weight in minimum space, and for radioactive screening

FIRST IN MAN-MADE METALS FOR BETTER PRODUCTS

of the dollar. Researcher Goldsmith admits that this step might involve the widest margin of error in all his complex techniques. Accurate methods of adjusting prices are just impossible to get.

• **Land**—The valuation of land is another illustration of the all but impossible task of getting accurate data and good cost and price deflators. To start with, land cannot be valued like other items—by subtracting depreciation allowances from original cost. So the estimate had to be built up by using a ratio between land and structures—the ratio depending on the type of structure. The value of the structures was figured out by the usual method of subtracting depreciation from original cost. Then the value of the land was determined by applying the ratio. For instance, if the ratio of the value of apartment houses to the value of its land were set at 4 to 1, and if the total value of apartment houses were \$40-billion, the land under apartment houses would be worth \$10-billion.

The estimates on vacant lots and public lands such as forests—where there are no structures to gauge the land by—are little better than guesses. For this and other reasons, the year-by-year figures jiggle up and down considerably, even after the land values are put on a constant dollar basis. In 1929 dollars, land goes from \$64.7-billion in 1900 to \$106.9-billion in 1928, then to \$78.6-billion in 1948. And the U. S. had the same amount of land throughout.

• **Gold and Silver**—The inclusion of monetary gold and silver as a form of national wealth (table, page 120) might not seem realistic to some people. Technically, the only value of the monetary metals is that it is a claim against goods. The intrinsic value is far less than the monetary value. And the concept of "national wealth" is in real terms—that is in actual economic goods.

But despite the big problems in totting up the worth of the U. S., the National Bureau's study is a large step forward.

• **What It's Worth**—These figures are the first step in filling a huge gap in economic knowledge—the question of who owns what and how much it's worth. To put it another way: This is a first stab at a balance sheet to set beside the flow of figures on national income.

Currently, we have detailed figures on total national income and fairly detailed figures as to who receives it—farmers, businessmen, industrial workers, and other groups. Goldsmith's figures give us the first outlines of the matching picture of how accumulated wealth is divided. They're still largely of academic interest—but they may be the foundation on which economists will put together better tools for forecasting.

# TAXES

## Inventions Pay

**If you're in a high tax bracket, you can back an inventor without much risk—or too much tax.**

The annals of U.S. industry are dotted with cases where inventors made rich strikes. Backers of the inventors have sometimes shared in the good fortune; sometimes they've given up too soon. Anyway, Congress recognizes the value of the Edisons and the Good-years—and their backers. The tax laws give them definite advantages.

As a result, it doesn't cost too great a share of your income to be an angel for an inventor. And if you play it right, the returns won't be so heavily taxed, either.

• **For Instance**—Take a simple case. Joe Doakes comes to you with an idea about a time-saving piece of machinery. He wants to build a model, experiment with it, improve it. But he needs money; you provide it in return for an interest in his invention.

Here's how you can get two breaks from a tax standpoint: If the invention is successful (and there are other conditions to be discussed later), your profits will be taxed as capital gains, a maximum of 26%; if you lose your money, it's fully deductible against other ordinary income.

The first break can help you this way. Your other income may be enough (roughly \$50,000 for a single man, \$100,000 for a married man) to put you in a 75% income tax bracket. Additional income subject to ordinary tax rates, therefore, would net you only about 25¢ on the dollar. Your capital gain from success of the invention you angled, however, would net you 74% of the proceeds.

The second break comes if the invention wasn't successful. Then you wouldn't want a capital loss. That would only offset capital gains, and if you had none of those you could deduct a maximum of only \$1,000 from your ordinary income. But the tax law allows you to deduct your entire loss from ordinary income if the invention doesn't work out. So your out-of-pocket loss thus drops to only 25% of your investment.

• **Success**—Suppose Joe Doakes comes up with a workable, desirable invention. He patents it. At this point, according to your original agreement, you get an assignment of a share in the patent. Now you and Doakes are



## Reflecting good management

**Washrooms rank as one of the four most important factors in good working conditions**

A clean, modern washroom—with plenty of hot water, soap, and ScotTissue Towels—is a sign of a “good place to work.” According to a survey of workers from 400 plants, washrooms rank as one of the first four essentials in good working conditions.

ScotTissue Towels have long been regarded as a symbol of the right kind of washroom. These softer, more absorbent towels have a certain quality “feel” to them. They stay tough when wet, too—and one dries both hands. Remember to specify ScotTissue Towels. For suggestions on improving washrooms generally, contact the Washroom Advisory Service, Scott Paper Co., Chester, Pa.

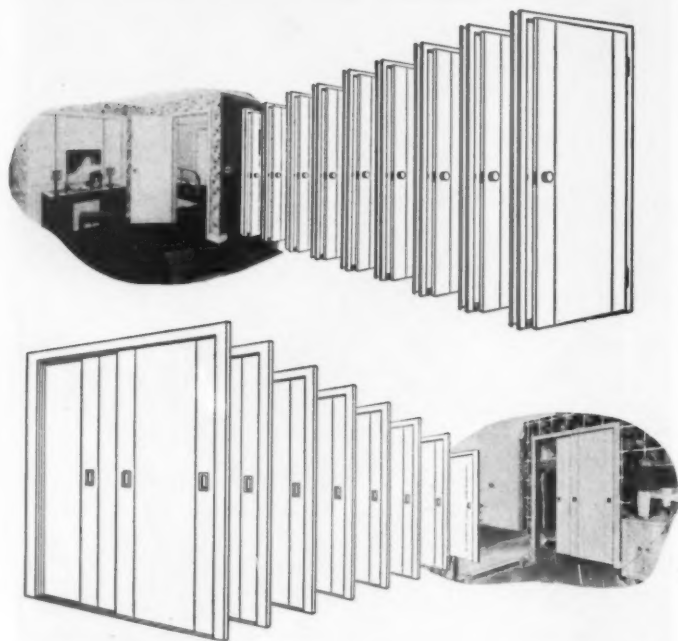
“ScotTissue,” “Washroom Advisory Service,” Reg. U.S. Pat. Off.

## SCOTTISSUE TOWELS

**Symbol of the right kind of washroom**

**IMMEDIATE DELIVERY!**

## Truscon Residential Interior Steel Doors



Now you can design and build into your residential projects these newest and smartest of all interior doors . . . and get prompt delivery from warehouse stocks to coincide with your building schedule!

Greatly increased production facilities enable Truscon to set larger manufacturing schedules for these strong, beautiful swing and slide steel doors. They offer these exceptional advantages:

**STABLE DIMENSIONS.** Won't ever warp, twist, shrink or swell.

**QUICK INSTALLATION.** No fitting, cutting or planing at any time.

**EVERYTHING FURNISHED.** All hardware, hinges, locksets and frames supplied with each door.

**LOW COST.** Compete very favorably with doors of other materials when all factors are considered.

See SWEET's for complete details on the entire line of Truscon Residential Steel Doors (Swing and Slide Types) for every purpose; and write for detailed literature on all other Truscon Steel Building Products.



TRUSCON . . . a name you can build on

## TRUSCON® STEEL COMPANY

1076 ALBERT STREET  
YOUNGSTOWN 1, OHIO

Subsidiary of Republic Steel Corporation

Manufacturers of a Complete Line of Steel Windows and Mechanical Operators • Steel Joists • Metal Lath • Swooldeck Roofs • Reinforcing Steel • Industrial and Hangar Steel Doors • Bank Vault Reinforcing • Radio Towers • Bridge Floors.

*" . . . It preserves capital gains if your inventor is a spare-time genius . . . "*

**INVENTIONS PAY** starts on p. 123

in a position to dispose of the invention at a profit. How you do this has varying tax results.

Generally speaking, an outright sale of the patent will yield capital gains while a licensing and royalty arrangement will yield ordinary income. There are catches in this generality, though, and ways to get around them.

• **Amateur or Pro?**—Whether you get capital gain or ordinary income from an outright sale of a patent, for example, may depend on the status of your inventor-partner. If he makes a business of inventing gadgets and holding patents for sale to customers, all income from the sale is ordinary income—yours as well as his. But if he has kept his amateur standing, if his work on the invention is a hobby or side-line from his regular career, then the proceeds of the sale are capital gain.

(Before 1951 this rule for capital gains also applied to authors. That's how Gen. Eisenhower was able to get a capital gain when he sold his book, *Crusade in Europe*—he had never been a professional writer. Now Congress has changed the law so that even amateur authors have to pay ordinary income tax on the sale of their writings.)

• **Spare Time**—It helps preserve your capital gain rights if your inventor is a spare-time genius. But you can't be sure even then.

Marvin R. Thompson, while employed by the Food & Drug Administration, used his spare time to try to improve methods of testing ergot, a drug. In the course of his experiments, he discovered a process of making a fluid extract of ergot and, later, how to isolate two of its components. He acquired, and sold, three patents over a six-year period. One patent turned out to be valuable.

The tax court ruled that Thompson should be taxed only for capital gains on the sale of all three patents. Although he put in about 40 hours a week on his experiments, he did it all in his leisure time, the court found, not as part of his regular work. His patent sales were "unusual and not of such continuity or regularity as to justify a finding that the taxpayer was engaged in the business of selling patents," said the court.

On the other hand, there's the case of Harold T. Avery. He, too, worked on inventions in his spare time. But a tax court refused to allow his claim of a capital gain on the sale of a patent





cut down on  
chemical, mineral and grain  
drying expenses... with a  
**LOUISVILLE DRYER**  
by  
**General American**



Louisville Rotary Cooler with rotary shell and external water sprays.



Louisville Rotary Steam-Tube Dryer —indirect type using steam as heating medium, and utilizing 85% of that steam for useful work.

There is a **LOUISVILLE DRYER** for better drying in the following industries: Brewing • Canners By-Products • Chemical • Distilling • Fertilizer • Fisheries • Feeds • Foods • Mining • Packing House Products • Wood Products



LOUISVILLE DRYING MACHINERY UNIT  
**GENERAL AMERICAN TRANSPORTATION CORPORATION**  
General Offices: 135 South LaSalle Street, Chicago 90, Illinois  
Dryer Sales Office: 139 S. Fourth Street, Louisville 2, Kentucky  
OFFICES IN ALL PRINCIPAL CITIES

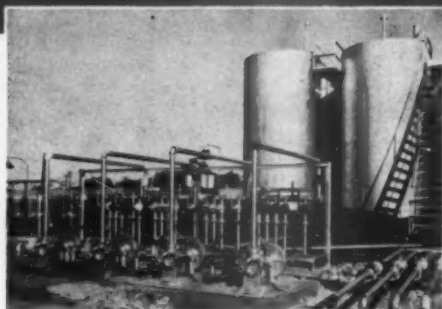
## Know the results before you buy!

A Louisville engineer can tell you every saving, every improvement, every bit of increased efficiency *before* you invest. A Louisville Dryer is fitted to your job. It's the result of a Louisville engineer's complete analysis of your particular problem, of *knowing* your problem thoroughly... and solving it by applying 50 years of drying experience, and using the testing facilities of General American's laboratories.

More than once, a Louisville Dryer has turned a losing operation into a profitable one. Write or call for a Louisville engineer to make an obligation-free survey of your operation.

## SINCLAIR REFINING COMPANY Saves TIME! - Saves COSTS!

with  
**VIKING  
PETROLEUM  
HANDLING  
PUMPS**



**An ALL-WEATHER INSTALLATION  
with no Protection of Any Kind!**

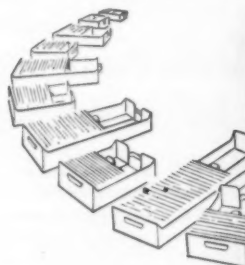


Viking Pumps are built to deliver efficiently all types of petroleum products from LP-gas to grease. Send for descriptive literature.

**VIKING PUMP COMPANY**

CEDAR FALLS, IOWA

THE ORIGINAL "GEAR-WITHIN-A-GEAR" ROTARY PUMP



## LOOK, NOW MY FILES COME TO ME!

I have 40,000 big 8 x 5 record cards in my new Rotor-File . . . all at my finger tips. I can give my boss the information he wants the moment he wants it . . . without moving from my desk or chair.

These same cards used to fill over a dozen file drawers. I had to walk back and forth from the files all day, stooping down to read the drawer labels, dragging out drawer after drawer. Now, I rotate this Rotor-File of mine and the records come to me — instantly. My job is done easier because it takes less effort . . . better because I have time to think about my work.

The Wassell Methods Engineer told me that most anything can be filed in a ROTOR-FILE . . . anything from cycle-billing records to correspondence. He even has models for tabulating cards and addressing plates.

If you, too, want to save time in filing, reference, and posting, send this coupon to Wassell today.

### WASSELL ORGANIZATION, INC. WESTPORT 3, CONNECTICUT

I would like literature on ROTOR-FILE . . . without obligation

NAME .....

POSITION .....

Please attach to, or write on, your business letterhead

**4 WASSELL EXCLUSIVES**

PRODUC-TROL  
INSTALVELOPE

ROTOR-FILE  
SIGNALOK

**"... The law protects the seller if he wants to keep control ..."**

INVENTIONS PAY starts on p. 123

to his employer. It found that his spare-time inventing had gone on for 17 years and had produced 12 patents, of which he had sold two and granted licenses for two more.

In this case, the sale of the patent to his employer was not an isolated transaction, the court ruled. "What may have been a hobby originally," its decision stated, "became a trade or business when he held the patents for sale or license to others for profit."

• **Continuing Interest**—Your chances of getting capital gains treatment will be improved if you and your inventor-partner get a substantial interest in management of the company that's going to exploit the invention. Sale of a patent to a company in which the inventor has a continuing interest through stock ownership is usually regarded as a capital gain. It's not a sale to customers, but is the use of a company for financing, developing, exploiting.

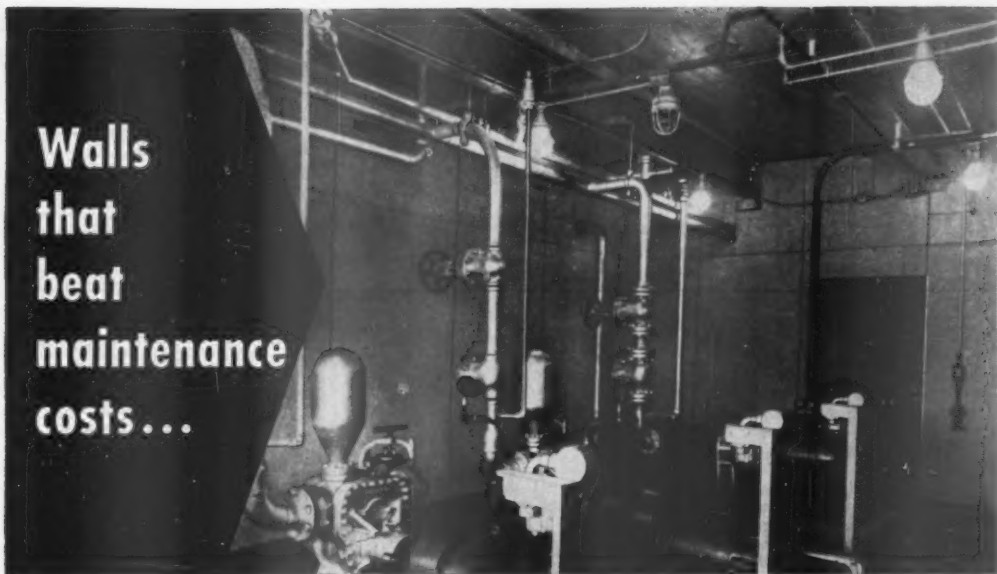
Take care, though, if your inventor conducts a business in a line allied to the patent and takes tax deductions for expenses of developing inventions. For example, a machinist was in the business of building machinery to special order. He deducted his expenses on a machine he invented. The tax court said his proceeds from sale of the patent should be taxed as ordinary income.

• **Sale, With Hooks**—Since, unless the inventor is a professional, outright sale of a patent is clearly a capital gain that may be the safest way of disposing of an invention. But the owners may prefer a licensing agreement to outright sale. The tax law gives the seller a lot of protection if he wants to keep control of the area of market, pricing, minimum requirements for royalties. If he's careful, the patent seller can keep this control and still hang onto the advantages of capital gain.

Ordinarily, royalty income from a license to use a patent is ordinary income. To be a sale under the tax law, you must dispose of three rights: the right to make, the right to use, the right to sell. If you retain any one of these, the tax people call it a licensing agreement (ordinary income rather than a contract of sale, capital gain).

If you make sure you transfer the three rights, however, you can still get capital gain for a sale under an arrangement that's in the nature of royalties. The patent can be sold for pay-

Walls  
that  
beat  
maintenance  
costs...



Water treatment room in large utility plant. Walls are "Century" APAC,  $\frac{5}{8}$ " thickness.

## they're "Century" APAC!

In the water treatment room above you see how to build walls that won't need maintenance: Use "Century" APAC—Kearsbey & Mattison's versatile asbestos-cement structural sheet. APAC can fill nearly all your surface covering needs... interior walls and ceilings... exterior walls... on new structures and modernizations.

### CONSIDER THE ADVANTAGES OF APAC:

**APAC won't burn!** Made of asbestos fibers and Portland cement—both inorganic—APAC will not support combustion... makes an excellent fire-retardant barrier!



**APAC is maintenance free!** It cannot rot, rust, or corrode—rodents and termites can't hurt it. APAC doesn't even need protective painting to preserve it!



**APAC is easy to handle—easy to apply!** Can be cut and fitted on the job—no milling or planing to bother with. Large-size sheets (standard 4' x 8') facilitate rapid coverage. Can be fastened with ring fettered nails or screws. Application labor costs are kept to a minimum!

You'll find "Century" APAC used today in hundreds of plants, in dozens of industries: For siding, office paneling, fire-resistant sheathing in shops and stockrooms, storage bins, linings for elevator casings, shower stalls—in fact, wherever quick, economical construction and maintenance-free service are wanted. Write us for complete information on "Century" APAC and the name of your nearest distributor.

**KEASBEY & MATTISON**  
COMPANY • AMBLER • PENNSYLVANIA

*Nature made Asbestos... Kearsbey & Mattison has made it serve mankind since 1873*



In Canada—ATLAS ASBESTOS CO., LTD., MONTREAL, TORONTO, WINNIPEG, AND VANCOUVER

# Here's You on a SOUTHERN CALIFORNIA business trip!

When you can cast an eye over a large, expanding market and enjoy a vacation at the same time—man, that's a business trip!

For Southern California ranks first, second or third in about anything you want to mention—and a field where it ranks right on top is in its capacity for offering fun, sunshine and quiet relaxation.

After a tough day of conferences, for example, you're off on a merry-go-round of seeing the town. You'll drive past fabulous new buildings, eat at famous cafes, and get acquainted with the world capital of movies, radio and television.

Next day, there's golf and a beaming sun to tan you as brown as a berry. You can drive along flower-lined highways, see miles of fragrant orange groves and spend week ends by the sea or at gay desert resorts. Accommodations are plentiful.

So let us send you our special color folder that gives full information about vacationing in Los Angeles County and all Southern California. There's no cost to you—just mail the coupon today.



ALL-YEAR CLUB OF SOUTHERN CALIFORNIA, LTD., a non-profit community organization serving vacationists. This advertisement sponsored by Los Angeles County Board of Supervisors for the citizens of Beverly Hills, Glendale, Hollywood, Long Beach, Los Angeles, Pasadena, Pomona, Santa Monica and 182 other communities.

All-Year Club of So. California, Div. J-1  
629 So. Hill St., Los Angeles 14, Calif.  
Please send me your free color folder  
"PLANNING YOUR SOUTHERN CALIFORNIA  
VACATION."

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_  
State \_\_\_\_\_

PLEASE PRINT NAME AND ADDRESS

"... BIR will fight it out  
wherever a sale smells of  
a royalty agreement ..."

INVENTIONS PAY starts on p. 123

ments contingent on sales or profits or for a percentage of gross revenues. Or the price may be measured by the number of units produced by the buyer or by how much the invention saves him.

• **Safe Conditions**—Sales of a patent for a percentage of the buyer's revenue, profits, or units produced depend for their value on how successfully the buyer can exploit the invention. So the tax regulations recognize the right of the seller to demand stipulations and conditions to protect himself, without voiding the transaction's status as a true sale. The seller can demand such things as the following, for example:

- Return of the title to the patent to the seller if the buyer goes bankrupt.
- Cancellation of the deal by the seller, and return of the patent to him, if payments prove less than an agreed minimum amount for a fixed period, or if the buyer breaches the contract in any other way.

- Retention of control by the seller over terms of resale by the buyer or later licensing by the buyer.

• **Example**—Edward C. Myers invented a rubber-covered flexible track. He granted the B. F. Goodrich Co. an exclusive license to make, use, and sell any devices using his invention in the United States, its territories and possessions. Goodrich was to pay him a royalty on sales. If the royalties didn't reach a certain amount in one year, Myers could cancel the license. After the first year Goodrich could also elect to cancel the license.

The courts found that this type of exclusive license was the same as a sale. The royalty payments were, therefore, the selling price—subject only to capital gains tax. The rights of both parties to cancel the license under certain conditions did not invalidate the agreement's standing as a sale, the tax courts ruled.

• **BIR Unhappy**—Originally, the Bureau of Internal Revenue agreed to be bound by the Myers decision. However, in March, 1950, BIR changed its mind and decided to fight it out wherever a purported sale smells of a royalty agreement.

BIR says it will attempt to tax the gain as ordinary income wherever the sales price is "measured by production, sale, or use" or where payments are made in installments that end with the use of the patent by the buyer. So far, though, the courts have continued to follow the line of the Myers case.



More women go out and buy Woman's Day  
than any other magazine in the world\*



\*3,865,000 average single-copy sales per issue  
...the world's largest single-copy circulation  
...on sale at all A & P stores

## TRANSPORTATION



TRAMP SHIPS like this Liberty, tied up at a Baltimore pier, keep essential supplies moving abroad. Shippers vie for cargos of . . .



COAL: Destined for European ports, coal is dumped 35 ft. into hold. Lion's share of the more than 47-million tons of coal exported last year traveled in tramp ships.

## U.S. Tramp

It takes more than abracadabra to make a whole industry disappear, then reappear. But that's just what happened to U.S. tramp shipping—twice in a century.

Today tramp shipping under the American flag is not only back; it's booming. Reason for the comeback is the combination of a fleet left over from World War II, the European aid programs, and legislative boosts.

• **Thin Ice?**—Before 1946 the tramp shipper was a rarity here. Now about 40 concerns are tramp shipping, picking up bulk cargos wherever and whenever they offer and carrying them to any port the shipper desires. These concerns own over 200 ships, mostly 10,000-ton Liberties, and help run about 600 more for the government.

As a war baby, the industry is doing fine, especially since Korea, when cargos started looking for ships instead of the other way around. But trampng is a risky business, and skeptical ship-



WHEAT: Trimmers level off grain cargo, blown into hold through chutes, make sure every corner is filled.

## Shipping: Second Chance of a Century

pers are already worrying about what will happen to the industry should the international situation stabilize and cargos shrink. For then domestic fleets will again have to compete with foreign tramp fleets that operate at one-half U.S. costs.

• **Ups and Downs**—American tramp shipping has had to fight for survival from its early Yankee clipper days. At that time, most ships were tramps: They operated on unscheduled, irregular sailings, carrying bulk goods from wherever they were offered to wherever they were needed. Each ship serviced a small number of buyers and sellers. Although in the early 1820s tramp ships handled about 90% of the country's foreign trade, they lost their grip around the middle of the century when the steamship arrived. American shipping couldn't keep up with British mechanical knowhow and was slowly edged out.

Before long the industry sank out

of sight. It wasn't heard from again until World War I. The war swelled world shipments and spurred big U.S. shipbuilding operations. As a result, an American tramp fleet reappeared and had a brief, sporadic fling. But the heyday didn't last very long. The industry again took a beating in the 1921-22 shipping depression, and the '30s finished off the job.

• **Shot in the Arm**—It took another world war to bring the submerged industry back to the surface. With the firing of the first guns of World War II, every ship became worth its weight in gold almost overnight. Shipping rates rose so rapidly that in a few cases ships paid for themselves in a single trip. And the wartime shipbuilding program, with its fleet of Liberty ships, gave the industry another big boost.

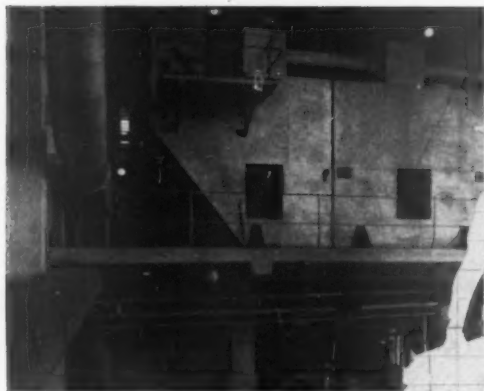
In fact, most outfits that are tramp shipping today owe that development to government operations. When the shipbuilding program began turning out

Liberties in 35 days, the War Shipping Administration had to find somebody to run them. It turned to the steamship companies, made qualified companies general agents for the government and compensated them on a fee basis.

• **Good Beginning**—Not long after these operations got under way, the agents began bursting at the seams.

When it looked as though the steamship companies had expanded as far as they could, WSA reached out for steamship agencies and chartering brokers' concerns that had shipping experience but had not owned ships before the war. Some 30 agents and brokers rose to the occasion, and at the peak many took on from 20 to 30 ships. The result was that at the close of the war the U.S. had not only a fleet of ships, but a big directing force of shipping companies.

• **Cleared the Way**—The Maritime Commission supplied the next push



'SF' Electric Precipitator couples peak efficiency with peak Economy in Soda Ash Collection at a paper plant.

## No Plant Process Should Lose Valuable Dust!

The Buell organization of industrial 'dust' men is devoted solely to the design and construction of Dust Recovery Equipment that will most efficiently and economically solve your plant's specific valuable dust problem.

For more than 18 years we have been doing just this for all American industry. Every Buell installation is a custom-designed system, engineered to assure peak recovery of valuable dust and permit new profits, improved products and/or process, better plant-community relations, and higher levels of employee morale.

For full information about Buell's **three basic systems** of dust recovery and dust collection, and how one can be applied to your plant, write today. Ask for the new informative bulletin titled, "The Collection and Recovery of Industrial Dusts." Do it now! Buell Engineering Company, Dept. 30-L, 70 Pine Street, New York 5, N. Y.



# buell

HIGH EFFICIENCY CYCLONES • ELECTRIC PRECIPITATORS  
TYPE 'LR' COLLECTORS • LOW DRAFT LOSS COLLECTORS  
SPECIAL PURPOSE COLLECTORS • DUST HOPPER VALVES

ENGINEERED EFFICIENCY IN DUST RECOVERY



*Let a Buell industrial 'dust' man show you how reclaimed valuable dust can boost profits and efficiency in your plant.*



ORE is lifted out of hold. Grab bucket takes about 15 tons in one load.

toward a private merchant marine right after the war. MC told general agents they could charter government ships for their own account to carry relief cargos, mostly grain and coal to Europe and the Far East. Under this so-called "bareboat" setup, companies acted as owners, shared the profits with the government.

Until around the middle of 1948 goods flowed heavily enough to keep up to 1,500 U.S. ships busy, especially since foreign fleets were still in bad shape. UNRRA, then ECA, called for large-scale movements of bulk cargos. And the tramps got an added boost when Congress required that 50% of goods paid for by the U.S. go in American ships. Shipping rates naturally soared, with coal alone moving to the continent at a high of over \$12 a ton in 1947.

• **Sink or Swim**—In spite of such a promising start, though, the newly revived industry began to sink again by the beginning of 1949. For one thing, relief cargos began slowing down. Then along came the crippling March-April, 1948, coal strike. And to make matters worse, competition from recovered foreign fleets began stiffening up. These developments left their mark on the industry: Rates on coal to the continent sank to as low as \$6 or \$7 a ton, and a damaging rate differential grew up between American and foreign ships.

Tramp operators soon realized they had to do something—and in a hurry—to keep their heads above water. Some cut down their staffs as much as 50%. Others turned in ships they had bareboat from the government and concentrated on saving the ships they owned. The active U.S. tramp



# Tell it to Kimberly-Clark

An idea exchange service for  
advertisers and buyers of printing

## Sell your advertising to your own company, too!

The importance of promoting your own advertising cannot be overemphasized, because every member of an advertiser's organization has a stake in his company's advertising. But to appreciate it and "tie in," they must *know* about it. It's essential to keep management people posted, as well as salesmen and distributors—if you want them on your team. Only when all of them understand the objective of your campaigns, how and why the campaigns were evolved, and are kept informed as to what you're saying to whom and where—will your advertising be of maximum interest to them. A 3-point program (such as the one we make available to advertisers) should be broken down as follows to accomplish these objectives: 1—a series of folders to hold proofs, schedules, and discuss the advertising in terms of its helpfulness to the man who sells. 2—a series of cover folders, pocket pieces, mailers, postcards, etc., to merchandise specific ads. 3—complete issues of magazines where company's ads appear, with cover stickers to direct V.I.P.'s to the proper page.

Edward W. Hermann,  
McGraw-Hill Publishing Co.,  
New York, N. Y.

## Cuts catalog size—reduces postage

Did you know that using your printer's shears wisely can reduce direct mail costs? For example, we mail a large number of 72-page catalogs which were



5½" x 8½" finished size. By trimming them to 5¼" x 8¼", we took off enough weight to change the postage rate per catalog to the extent that the savings almost paid for the envelope! If you'd like to try it, have your printer make up several dummies in the paper weight you



intend to use, then let the postmaster weigh them to determine the most economical size.

Paul P. Karnov, General Manager,  
H. E. Mason & Co., Chicago, Illinois

## Stencils make truck painting easy

The posting of sales material on the trucks of distributors has plagued many



an advertiser. However, we have been using with great success a stencil of our products' trade names and characters, in four colors. The stencils are made of oil skin and give a complete color separation outline. With them, even an amateur painter can turn out a professional four color job. Since a truck can be quite effectively "dressed up" without the ex-

cessive cost of a body paint job, these stencils have great appeal among our distributors.

Murray Morgan, Advertising Dept.,  
Ice Cream Novelties, New York, N. Y.

## Do you have an item of interest?

Tell it to Kimberly-Clark!

Any item of interest pertaining to advertising or printing is acceptable, and becomes the property of Kimberly-Clark. For each published item, a \$50 Defense Bond will be awarded to the sender. In case of duplicate contributions, only the first received will be eligible for an award. Address Idea Exchange Panel, Room 160, Kimberly-Clark Corp., Neenah, Wis.

• • •

Remember—you add crisp freshness and sparkling new sales appeal to advertising pieces, brochures, reports, house organs—when they're done on fully-coated Kimberly-Clark printing papers. For brighter, sharper, smoother reproduction in any fine letterpress or offset printing job, always specify Kimberly-Clark.

**Kimberly-Clark Corporation** NEENAH, WISCONSIN

Quality Machine-Coated Printing Papers

Hifect® Enamel Lithofect® Offset Enamel Trufect® Multifect®

© KIMBERLY-CLARK CORP.  
\* U. S. PAT. OFF.





## Give this book the "pink slip"

Nobody will be sorry to see it go—and your bookkeeping department will be downright *happy*. No more needless historical bookkeeping for them—no useless, time-consuming ledger postings.

What's to take its place? Todd Blue Streak Voucher checks. With Todd Blue Streak Vouchers there's no need to write separate check stubs, check registers or receipts. No need to address envelopes, either. Cash book and purchase journal postings can be reduced to one a day, even if you write hundreds of checks daily. And you still have positive control. You also have maximum protection because Blue Streak Voucher checks are printed on Protod-Greenbac paper that defies alteration and counterfeiting. Insurance guarantees this protection!

Get all the facts about Blue Streak Vouchers and what they can do for your business. Mail the coupon below for details.

**Todd**  
**COMPANY, INC.**

ROCHESTER SALES OFFICES IN NEW YORK  
PRINCIPAL CITIES

DISTRIBUTORS THROUGHOUT THE WORLD

THE TODD COMPANY, Inc.,  
Dept. BW, Rochester 3, N. Y.

Please give me full information about Todd Blue Streak Vouchers. No obligation on my part.

Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

BW-1-19-52

fleet shrank to 125 ships, about 8% of its size at the height of the bareboat program. Companies ran their ships at losses amounting to as much as a couple of thousand dollars a trip; it was cheaper to run the ships than to lay them up.

• **A Lifeline**—Now Korea has pulled the switch again. As soon as military operations got under way, the Military Sea Transportation Service snapped up all the ships it could get in a hurry.

A sharp revival of coal and wheat exports at the start of the year temporarily sent tramp rates skyrocketing. To hold them down, the government had to pull some 600 or more ships out of mothballs and charter them to companies. Even so, coal now moves to the continent at about \$10.50 a ton.

A good clue to how high tramp shipping is riding today is the fact that most shippers who bought Liberties for \$560,000 in 1947, and maybe sold some of them for \$300,000 in 1949, won't take an offered \$900,000 today. Another index is the fact that tramps carried the lion's share of the 47-million short tons of coal shipped to Europe in the first 10 months of 1951. And they moved a big chunk of the 357-million bushels of wheat exported in the first 10 months of 1951.

All this is reflected in the growth of individual operators, such as Orion Shipping & Trading Co., now the largest concern that specializes in tramp shipping. Orion started from scratch in 1946, now owns 67 ships and runs another seven for the government.

• **Precarious**—Obviously, tramp ships don't have to look far to find customers nowadays. But tramp operators are constantly being reminded that, of all the branches of shipping, the tramp is the biggest gamble. You need more than a working knowledge of the shipping business to keep a tramp ship busy. You need a detailed knowledge of the basic movements of bulk goods throughout the world, skillful planning to put your ship in the right spot at the right time, and above all an ability to operate close to the chest in a highly competitive market.

A major problem U.S. tramp operators face today is keeping costs down. And one of the big reasons why it costs an American twice as much as a European to run a given ship is the steady rise in seamen's wages. The basic wages for able seamen alone have climbed 52% since 1946.

• **Free for All-Few industries** today are as freely competitive as tramp shipping. With one ship, you can compete for a cargo on an equal footing with the man who owns a fleet. And ordinarily, there are enough buyers and sellers around so that no one dominates the market.

But even if you operate with peak

## Bothered with gas shortages?

If your plants are faced with natural gas curtailment you will find the answer in a Draketown Propane Plant. Simple to operate—accurate—ready at a moment's notice—Draketown provides a completely interchangeable fuel automatically. No loss in efficiency or production. If you have a Gas Problem—we can help you.



Your Assurance of a  
Good Job

"Serving utility and industry for over 30 years!"

**DRAKE & TOWNSEND**

Consulting • Design • Engineering • Construction

11 WEST 42ND STREET • NEW YORK 18, N. Y.

## 2 POINTS

you can  
always  
count on in

**Potter &  
Brumfield  
RELAYS**

1. accuracy
2. dependability

... reflecting in your product the sign of good design ... consistent quality manufacturing.

Leading supplier of relays for every electrical and electronic application. Specialists in relays for military equipment.

Send your specifications for recommendations, samples, and quotations.



**Potter & Brumfield**  
PRINCETON, INDIANA PHONE 1200  
Sales Offices in Principal Cities



**STEEL COIL** weighs 5 tons, poses no stowage problem for skilled handlers.

efficiency, you're still at the mercy of the fluctuating freight market.

• **New Pattern**—In view of the riskiness of the business, it's not surprising that no tramp company has ever offered stock in the curb or stock exchange. Limited liability, too, seems to be the reason for the cubbyhole structure of tramp-operating outfits. In most cases, a large operator controls a group of companies, each of which owns a few ships.

In the postwar period government planning has upset traditional patterns of tramp operations. Rates received by private operators reflect those set by the government and are influenced by the release of reserve fleet vessels. The fact that the U.S. is exporting to Europe much more than it imports has converted the once flexible operations of the tramp into a one-way shuttle service, with many ships returning empty.

• **Ready for Trouble**—Some observers feel that long-range trends are ominous. Even in the late '30s there was a trend toward greater specialization in shipping, with more and more bulky commodities deserting the tramp for the liner.

Ownership of tramp tonnage was shifting from countries like Great Britain and Norway to those with lower operating costs, such as Japan and Greece.

U.S. tramp operators face another serious problem in trying to hang on to their share of ocean transport service. Most foreign merchant fleets have by now outstripped the U.S. in new, more efficient ocean tonnage, despite their heavy World War II losses. Unless the U.S. starts replacement construction soon, many of its merchant vessels, especially Liberty ships, will be obsolete in 10 years.

## 10-point FIRE PROTECTION

### YOU NEED IT...

**only "Automatic" Sprinkler provides it!**

Fire protection is serious business. A single automatic sprinkler may be called on to decide the fate of your company, whether it is a small single-plant operation or a large multi-million dollar corporation. Insist on all the plus values offered with 10 POINT Fire Protection. Here's what you get:

- 1 **JOB SURVEY and ENGINEERING ANALYSIS:** Detailed to meet individual needs.
- 2 **BASIC FIXED TEMPERATURE SYSTEMS:** Improved devices for fire detection and water extinguishment.
- 3 **RATE-OF-TEMPERATURE-RISE PROTECTION:** Recognized leaders in the development of high speed systems for all fire hazards.
- 4 **QUALITY CONTROL:** All system components—material and manufacture.
- 5 **ACCURATE PREFABRICATION:** Reduced installation time and expense.
- 6 **QUALIFIED INSTALLATION CRAFTSMEN:** Experienced in fire protection for all types of property.
- 7 **NATIONWIDE ORGANIZATION:** Expert fire protection engineers at your immediate service.
- 8 **INSPECTION AND MAINTENANCE:** Low cost service keeps fire-fighting equipment in fire-fighting condition.
- 9 **CONTINUING RESEARCH:** Constant improvement of old methods and development of new.
- 10 **CONVENIENT PAYMENT CONTRACTS:** Liberal lease, cash, or deferred plans permit payment out of savings.

Your "Automatic" Sprinkler Fire Protection Engineer is as near to you as your telephone. Call him today!

**"AUTOMATIC" SPRINKLER CORPORATION OF AMERICA**

YOUNGSTOWN 1, OHIO

OFFICES IN PRINCIPAL CITIES OF NORTH AND SOUTH AMERICA

*Get the facts!*

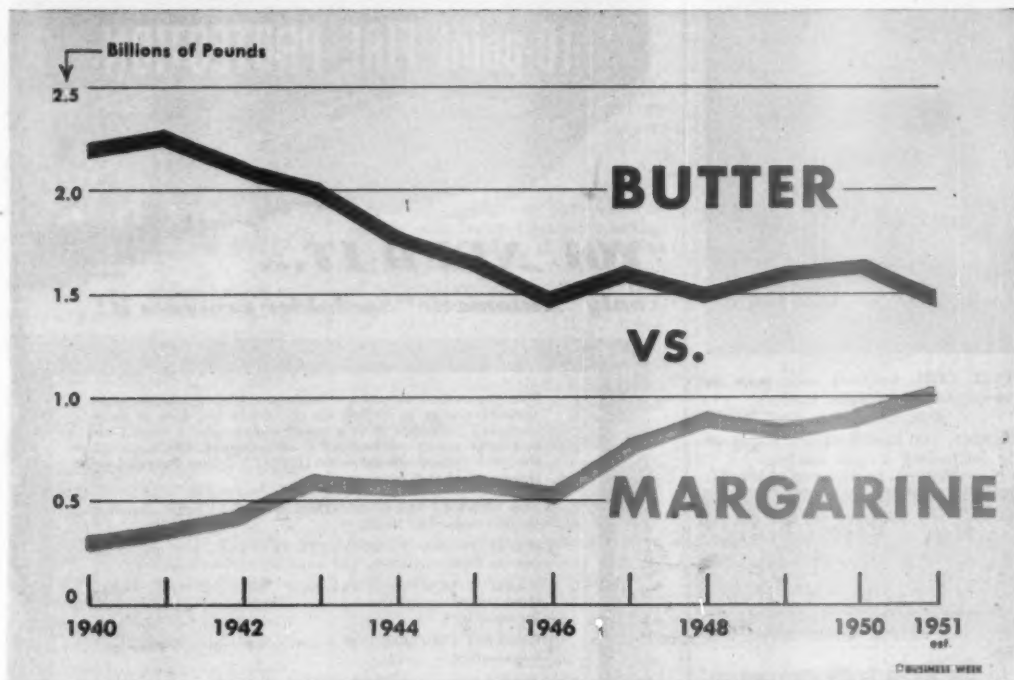
Write for our informative 36-page book, "The ABC of Fire Protection." It's free!



# "Automatic" Sprinkler

**FIRST IN FIRE PROTECTION**

# MARKETING



MARGARINE CONSUMPTION during the past 11 years has climbed, dragging butter down to the point where there's . . .

## Little Spread Between Butter, Margarine

If margarine closes the gap, the dairy industry may have to make some big changes in its marketing practices.

If it weren't for margarine, the dairy industry might think it had found the Promised Land.

Not only does the country flow with milk and honey, but better yet—in terms of the modern world—there's a market for this plenty. Last year the dairy industry raked in estimated cash receipts totaling \$4.4-billion. This year, with demand for fluid milk, cheese, ice cream, and other dairy products still running strong, cash receipts should even top that figure.

• **Slipping**—It's butter that isn't doing well, thanks to margarine. In a dozen years margarine has dragged down the sale of butter, very nearly closed the gap between the two (chart, above). There are three big reasons for this: scarcities of butter during and after the war, margarine's price advantage (it costs half as much as butter or less), and repeal of federal and state anti-margarine laws.

Now only eight states forbid the sale of yellow margarine, and there's a good chance one of them (New York) may repeal its ban this year.

• **More Potential Than Real**—So far margarine's effect on the dairy industry generally has been more potential than dollars-and-cents. Demand has been such that the milk left over from butter's decline has gone into other dairy products that yield more profit than butter.

But a number of people in the industry foresee future trouble. Margarine's inroads into butter have revealed some fundamental problems of the industry. Further margarine increases at the expense of butter will do a great deal:

• **To push the dairy industry further off the gold standard**—butter—which has traditionally set the industry's pricing:

• **To hasten a long-overdue revolution in milk distribution and marketing practices.**

• **Soul-Searching**—Dairy scientists and publications are asking the industry to re-examine some of its long-standing practices. Dr. P. H. Tracy, a dairy scientist of the University of Illinois, points up this trend. In Hoard's Dairyman, a bible of the industry, he asked if it isn't about time to "sacrifice some of our sacred cows."

Two of Dr. Tracy's sacred cows are at the heart of the controversy: the practice of classifying milk into several grades instead of one and the practice of paying for milk on the basis of butter fat content alone.

• **Here's How**—Very roughly, this is the way the farmer gets paid for his milk:

He hauls his milk in bulk down to the local dairy cooperative where it is dumped into a common pail. He gets paid on the basis of (1) the milk's butter fat content, and (2) the way the cooperative disposes of it. In other words, if



it goes out as fluid milk it gets one price; if it goes into other dairy products it gets other prices. It's the same milk but it has been classified into different grades, and then priced accordingly.

These prices are set with the price of butter as a yardstick. Once you've determined the butter price, then you work up the list—through cheese, canned milk, and other products—to fluid milk. (Fluid milk gets the farmer the best price, butter the lowest.) Butter is used as the bellwether in almost all the 30-add milk sheds where government marketing agreements set milk prices.

• **New Yardsticks**—Since the war, several major milk markets have gone off the butter standard. It started with Boston in 1948 (BW—Sep. 11 '48, p. 92). Next came New York. Most recent to join up was Philadelphia, in 1951.

The Boston formula ties milk prices in more closely with prices in general. Milk producers get a price based on three major factors: (1) the wholesale commodity index, (2) a New England index based on the wholesale price of grain and the average of farm labor wages, and (3) the index of department store sales published by the First Federal Reserve District. There's also a supply-demand adjustment factor that takes into account the size of the fluid milk surplus.

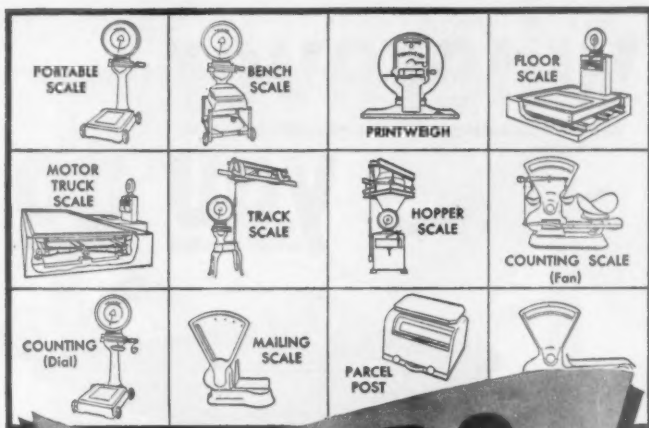
The New York and Philadelphia formulas differ in detail but are similar to the Boston one. The Philadelphia formula, however, takes into account butter prices. The other two don't.

• **Real Support**—A dip in the consumption of dairy products could help topple over what's left of the old butter-based price structure.

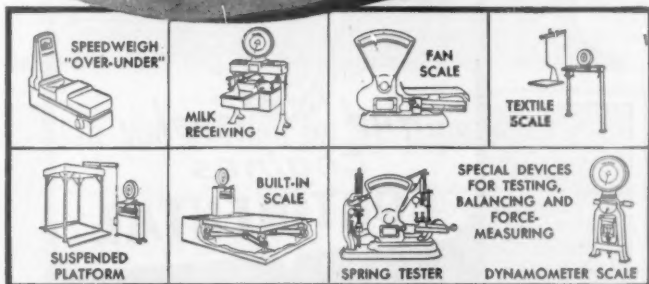
A slump would automatically push fluid milk into the manufacture of more butter. That's what happened between 1948 and 1949, when dairy cash income dropped more than \$650-million (BW—Jun. 18 '49, p. 58). One good reason for this shift is that butter keeps for a while, whereas milk doesn't. So the dairy can hope to sell some of its inventory eventually.

Now there's a second good reason. The 1948-49 slump propelled the government right into a price support program for butter, which cost \$250-million in two years' time. Naturally, if there's another slump, farmers will know that they can get the government to take the excess inventory off their hands in the form of price-supported butter.

Some people in the industry feel that support price operations will really only hasten the day of reckoning. They



## TOLEDO HEADQUARTERS FOR SCALES WEIGHING-COUNTING-FORCE MEASURING



### MATERIAL becomes MONEY on your SCALES!

Errors made at the scale stay wrong forever. There is no chance to recheck; either the material has been shipped or has lost its identity in the general stock. You've got to be *right*! Why not review your entire scale situation *now*? Have you up-to-date scales—or the *right* scales? Have you enough scales to cover all steps in materials handling? Do you need Printweigh to stop losses through human errors? Do you have special problems in weighing, checking, testing, counting, batching or force-measuring... there's a modern Toledo to do a better job for you. Send for this new weight control bulletin 2020-d.



Toledo Scale Company, Toledo 1, Ohio  
Please send me bulletin 2020-d showing modern applications of Weight Control.

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
BW-1

# wherever you go

....This Sign's Below



Not least among the reasons underlying owners' preference for planes with Continental power is the fact that Continental—and only Continental—provides the backing of established service wherever they may choose to fly. The need for such facilities is held to a minimum by sound engineering and rigid quality controls in manufacture; but even so, it's reassuring to know that you're never far from genuine parts and competent mechanics.

**Continental Motors Corporation**  
Aircraft Engine Division  
MUSKEGON, MICHIGAN

argue that supporting the price of butter simply increases the spread between the price of butter and that of margarine, bringing about higher margarine consumption, which in turn erodes butter's position further.

Even now butter manufacture isn't profitable for most dairymen. The return a dairyman gets from butter averages about \$1.50 per 100 lb. of milk less than the return for whole milk used for other purposes.

• **Upsetting the Cart**—Margarine's disruptive effect may also end by upsetting the industry's timeworn marketing and distribution practices.

As pointed out in Hoard's Dairyman, health regulations are used as tariff barriers to keep milk from flowing into many milksheds. For example, during recent years, health regulations of the District of Columbia have been used on several occasions to bar milk from outside the D.C. milkshed.

If there were a uniform health code, far-sighted dairymen point out, a good deal more fluid milk might be produced in areas where costs of production are comparatively low. If milk could flow freely, costs to consumers would be reduced, although total dairy income might be raised by increased volume.

• **Too Costly**—Another facet of the industry coming in for scrutiny is its distribution system. Many dairymen—particularly in the Midwest where surpluses resulting from less butter sales have forced herd reductions—think the delivery system for milk is too costly. The processing of milk in concentrate form—such as has been utilized with such success by the citrus industry—could provide markets for surplus fluid milk.

A concentrated milk actually has been developed which might be sold in stores at prices considerably below those for door-delivered milk. Concentration reduces weight two-thirds and could result in a saving of about 3¢ per quart in shipping from Minnesota to New York.

• **Not Enough Spread**—But there's a catch. Concentrated milk has been put into the highest price bracket (Class I) along with fluid milk. Milk producers have seen to that (BW—Mar. 31 '51, p86). As a result there's been hardly any price spread between whole and concentrated milk. In some areas it has been around 1¢.

Although concentrated milk only takes up a little room in a refrigerator, its only real advantage over whole milk is its price. And a 1¢ saving simply hasn't been enough to wean people over to a new and unfamiliar kind of milk. So the product has been doing poorly almost everywhere that it has been introduced. In some places dairies that have experimented with it have already thrown in the sponge.

## 13 Times Wider ...

... is the scope of each of the 13 public relations firms that have just banded into a nationwide pool.

When a public relations firm has to cover the whole national waterfront for a client, it costs the firm—and the client—a lot of money. For firms that don't have a nationwide network of branch offices, it poses real problems.

This week 13 public relations firms in 14 cities thought they had a solution. They pooled their facilities to form a new nationwide company, Public Relations Management Corp. Each member firm bought equal shares of stock in the new organization, set up executive offices in New York City and another office in Washington, D. C.

This merging of facilities, officials of the new company say, makes the firm the largest of its kind in the country—with a total of some 40 national clients plus the regional ones. It also makes for fast, efficient operation.

### • Blueprint—It works like this:

One member has a potential client for whom he wants to work out a program. Public Relations Management will set up a special planning board from the officers of the member firms. When the board has drawn up a program, it will submit its plan to all the members. For a national client, this rules out any chance that the program will be too local in approach.

An example of the service offered was shown this week: Holeproof Hosiery, a client of the Chicago member firm, had just concluded a limerick contest. The winner was a woman in Tenafly, N. J.—but the Chicago firm didn't need to send a representative all the way to Tenafly to get all the data to publicize the event. Using the teletype that links all 16 offices, it got the New York office to take over.

Paul Newsome of Newsome & Co., Boston, is chairman of the board. The president has yet to be appointed; meanwhile Nelson Moore, Nelson B. Moore & Associates, Cleveland, is acting president. Don Short of Don Short, Minneapolis, is secretary. W. Moscrip Miller, vice-president, heads the New York office. Donald Hogate is Washington chief.

• **Two Jobs**—The member firms will still operate independently for their own regional clients. But under the name of Public Relations Management Corp. they will pull their weight in problems of national scope.

Besides buying stock, each member pays a monthly fee to maintain the New York and Washington offices.

*COPYFLEX does it faster...better...cleaner!*



## Are you bottled up by paperwork?

Here's how to speed up your paperwork.

Get exact copies of vital business papers (even up to 42 in. wide) into your executives' hands *in a hurry* with no errors or smudges, by the Bruning COPYFLEX process.

This amazing process immediately reproduces practically anything drawn, written, typed or printed on ordinary paper translucent enough to let light through.

It usually is the most economical way to make 1 to 100 copies... only 2¢ a sq ft for all costs! No high-priced operator needed, anyone can make copies with a 5-minute explanation.

You merely insert the original into

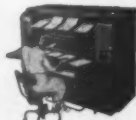
the COPYFLEX machine and in seconds you get a ready-to-use copy.

No masters or stencils needed... no ink to soil hands... no negatives, tray developing or darkroom to fuss with... no fumes to inhale, no special room light.

The applications you can make in streamlining your paperwork are almost limitless... reproducing Sales Control figures, Accounting and Financial statements, Inventory and Production Control reports.

**BRUNING**

Specialists in copying since 1897



COPYFLEX "50" is easy to operate, handles large volume of paperwork fast.

— CHARLES BRUNING CO., INC. —  
Dept. M12 100 Rouse St. New York 13, N. Y.

- ☐ Send me free booklet on COPYFLEX process and equipment.  
☐ Show me COPYFLEX in action (no obligation).

Name.....Title.....

Company.....

Street.....

City.....Zone.....State.....



**GOOD IDEA** in suggestion box got Mrs. Feeney—and 11 others—on Mays' Customer Council Board.



**INSPECTION** of sample blouse at board meeting gives Mrs. Robert Feeney and her mother, Mrs. Raymond Feeney, a chance to tell store what kind of merchandise they'd like Mays to carry. The board voted on suggestions.



**PANEL WORKING:** Board members swap ideas on rack displays with Harold Greenfield, store manager.





**LUNCH** is served at conference table. Max Shulman, Mays' vice-president, tells board about his trip to Europe, explains why imports cost so much. The ladies liked their advisory

job, didn't want to go home. And they are so eager to serve that many of them write in, asking if they may have the privilege. To idea people, the answer is yes.

## The Customers Help Run the Store

Get a group of women around a clothes rack or at a conference table. Set them talking about what they like to wear and what kind of store they like to buy in. The experiment is pretty sure to produce a lively session. It's quite likely to turn up some good merchandising ideas, too.

That seems to be the finding of J. W. Mays, Inc., Brooklyn specialty store. The big men's, women's, and children's wear shop held its first Customer Council Board meeting in December, plans another shortly. Ask Max Shulman, vice-president, whether there have been any tangible results and he'll tell you somewhat ruefully, "Well, it's made us spend a lot of money." In spite of the cost, though, Mays will probably hold the meetings on a monthly basis.

• **Store-Wide**—Consumer panels have been tried before. But president Joe Weinstein thinks this is the first time a cash-and-carry, big-city specialty shop has tried one on a store-wide basis.

The panel essentially is an effort to take some of the guesswork out of retailing—by listening to the customers. At Mays, it grows out of Weinstein's firm conviction that what the customer has to say is worth listening to.

In operation, the Mays plan is a sort of glorified suggestion box.

In fact, a suggestion box is the main-spring that keeps the plan ticking. To get on the board, a customer has to make a suggestion on improving the

merchandise or the operation of the store. From the flurry of ideas—about 800 so far—the executives weed out the facetious ones ("Burn the store down," "Get me a husband"). When they find ideas that seem particularly good, they interview the women who made them. From this group, they pick their board to serve for a three-month period. They try to get a cross-section of the store's customers: a working girl, a housewife, a college student, a teen-ager. In return for serving, the board members get employee discounts on goods in the store. There are also prizes for special merit.

The board meets in the executive conference room. Shulman conducts the meetings. He tells the conferees of the store's merchandising projects, shows them samples of the new lines coming in, asks for suggestions and criticisms. If the board votes to put a suggestion into effect, it's given a one-month trial. If it works, it's made permanent.

• **Displays**—The members then make an excursion throughout the store. They criticize displays, examine the racks full of clothes. Later in the week they visit the garment district in New York, see how the clothes are made.

At the December meeting, Shulman told of his trip to Europe last summer. He showed the women samples of French and Italian blouses, bags, and dresses he had bought, explained why they would cost so much if Mays tried

to sell the originals. The ladies, Shulman said, listened sympathetically. He asked what colors and styles they thought they'd like for the Easter lines. He invited questions.

He got them: "Why don't you arrange your sizes better?" "Why can't I get clothes that fit my teen-age daughter?" "Why don't you have more room to sit down?" "Why do you make that neckline so high?"

• **Telephones**—Some of the suggestions are already at work. One, Shulman said, was in the your-best-friend-won't-tell-you category. The women were dissatisfied with the washrooms. As a result Mays has started a \$10,000 program to modernize the lavatories. People had to stand in line too long to wait for a telephone. So Mays has installed a new bank of telephones. Husbands and grandmothers don't like to stand around while their relatives hem and haw over purchases. So Mays bought five dozen more chairs for them to sit on.

The complaint about the teen-age fit brought an investigation of that department. The store discovered that the clothes weren't cut to adapt themselves to the growing young miss. The buyer talked it over with the manufacturer, who is adjusting his patterns accordingly.

• **Ruled Out**—The store says no to any plan that would go counter to its policy of underselling competitors. Thus it refused to inaugurate a delivery service

# Quality Control Improved and on tricky steel casting Job

with **DIAMOND**

## "UTILISCOPE"

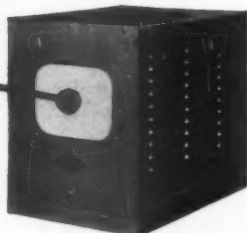
(WIRED TELEVISION)



On "Utiliscope" camera, operator safely watches molten metal rising in mold so he can accurately control rate of pouring.



"UTILISCOPE"  
CAMERA



"UTILISCOPE"  
RECEIVER

To assure the superior quality required of large cast steel rolls for steel mill rolling equipment, it is necessary to control metal pouring speed very closely. The diameter changes abruptly between bottom, center and top of the mold, so the only way to regulate pouring effectively is to watch the hot metal coming up in the riser.

But that's too hot and dangerous for direct observation. The Ohio Steel Foundry Company tried to "do it with mirrors", but couldn't see enough. Now they do it with the Diamond "Utiliscope" (Wired Television). This gives them a clear view of what is going on inside the mold at all times... with no danger to the operator who watches on the "Utiliscope" receiver screen in safety and comfort.

Here is another instance where the Diamond "Utiliscope" solved a tough, tricky problem by enabling the operator to see what can't be looked at directly. If you have any process that is too hot, too cold, too dangerous, too remote, or too inaccessible to be watched directly, get information on the "Utiliscope". Write for Bulletin 1025T.

**OTHER USES**—Studying destructive testing of engines • Checking remote gauge readings • Observing conditions inside furnaces • Viewing nuclear research Coordinating materials flow on conveyors.

The "Utiliscope" (Registered U. S. Patent Office)

**DIAMOND POWER SPECIALTY CORP.**

FIRST IN INDUSTRIAL TELEVISION

LANCASTER, OHIO • OFFICES IN 39 PRINCIPAL CITIES

Diamond Specialty Limited — Windsor, Ontario

Since 1903, Diamond has Manufactured Quality Equipment For Industry



WRITE FOR  
BULLETIN 1025T

or set up charge accounts—because to offer such services it would have to up prices.

• **Liaison**—One good effect is to keep the buyers on their toes. Another is that the gap between management and consumer is narrowed. Because Mays is a supermarket operation, with relatively few salespeople, that gap is wider than in service stores. Another factor that works to widen the gap is that the store has grown fast. In 1946 its business was running about \$8-million to \$9-million. For fiscal 1951, it was about \$24-million. And the bigger the operation, the greater the chasm between management and its customers.

A considerable chunk of that sales growth is the result of expansions. In 1950 Mays opened its first branch store, in Glen Oaks, Long Island. The over-all figures show a steady sales growth, but the picture isn't so rosy when the branch store's contribution is deducted. Mays, which thinks it is now the second biggest store in Brooklyn (Abraham & Straus is No. 1), hopes that the customer board may help boost sales at the main store.

## Snow Crop Deal Off

The biggest deal in the history of the citrus industry, between Clinton Foods and the Florida Citrus Exchange, fell through with a thud last week.

**The deal:** The exchange was to have bought the processing facilities and the concentrate inventory owned by Clinton Foods' subsidiary, Snow Crop, for \$32-million (BW—Oct. 15 '51, p. 146). Snow Crop was to have become marketing agent for the exchange with a guarantee that it would get enough concentrate to keep Snow Crop's place in the market.

The backers expected big things of the deal, including the stabilization of highly erratic citrus prices. (Oranges were \$3.75 a box at their peak two years ago; last week they were selling for as low as 50¢.)

**The catch:** It turned out that although the exchange ostensibly controls 25% of the Florida crop, it couldn't deliver that much. Some growers balked, evidently gambling on a rise in prices. The exchange fell short by an amount between 14-million and 3-million boxes, which Snow Crop would have had to buy on the open market.

Meanwhile, Snow Crop has switched to an alternative plan. It has worked out an arrangement with its three co-packers—who pack under the Snow Crop label—whereby they hold their share of the Snow Crop inventory. The expense of holding inventory was a major Snow Crop headache that the exchange deal would have eliminated.



MODERN for moderns keyed the Chicago and Grand Rapids furniture markets. This group was designed by Paul McCobb for the B. G. Mesberg Sales Organization.

## Furniture: High Hopes, But . . .

Chicago and Grand Rapids markets see brisk buying, tempered by unhappy recent memories. Modern design triumphs, with lots of entirely new lines.

The keynote at the Chicago and Grand Rapids semiannual furniture markets last week was one of cautious optimism. Attendance in both places was good, but buying ran from moderate to light. Nobody had forgotten last year's heavy overstocks and the spring and summer slump. Both manufacturers and retailers showed they meant to make 1952 different.

• **High and Low**—The manufacturers' solution was to bring out an uncommonly large number of entirely new lines. This was the year when modern design convincingly triumphed. That was particularly true in Chicago's American Furniture Mart and Merchandise Mart.

Fresh, new designs weren't limited to high-bracket stuff; the medium- and lower-priced lines had them, too. Even mass producers of standard upholstered lines proved more style-conscious than ever before. For the first time a good number of the lower-priced manufacturers had hired professional outside designers. Well over half of the new furniture, manufacturers estimated, fell into the modern style groups.

• **New and Old**—Even traditionalists bowed to the trend. One better-class traditional house had two new groups in informal modern, and only one new traditional line. A mailorder house buyer said his company was considering

dropping the old style "borax" or commercial designs from its catalogs. There was still a market for them in farm areas, but demand is stronger for the modern lines.

As an extension of this trend there was an increase of correlated groups. These consist of 20 to 30 pieces of related design for living room, bedroom, and dining room.

In Grand Rapids the big news in style was provincial, especially American provincial. The Italian influence was evident in almost all contemporary designs. New finishes in Grand Rapids ran to the darker hues. In Chicago, cherry and pine in new warm, light tones were strong. Lines were simple, casual; fabrics textured or tweedy.

• **Casey**—Prices, too, reflected the generally cautious atmosphere. They averaged about 5% to 10% lower than last year. And better workmanship, design, and finish suggested higher prices than were on the tags.

Despite all this, the manufacturer ran head-on into conflict with the retailer's determination not to get stuck again. For the retailers, the answer was: Take it easy.

The very variety of new offerings seemed to work against heavy orders, at least in Grand Rapids. Some buyers were bewildered by the choice. They were scared to buy heavily for fear they

## New In-Transit Point East or West Offers Distribution Savings

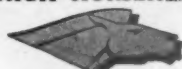
Complete warehousing service now offered at Horseheads

- Carloads in and out
- LCL consolidation
- Packaging, repacking
- Processing, bottling

Horseheads Industrial Center is served by 30 truck lines and 4 railroads: D. L. & W., Lehigh Valley, Erie, Pennsylvania. New construction offered on low-rental basis, for storage, processing, assembly.

For full details, write:

**LEHIGH-HORSEHEADS**



**WAREHOUSE CORP.**

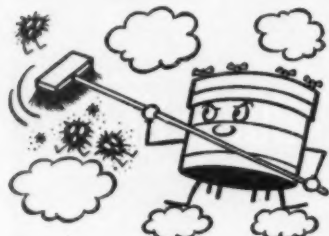
Horseheads, N. Y. or

98 Frelinghuysen Ave., Newark, N. J.

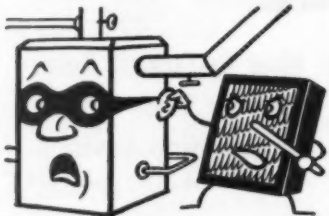
# AIR-MAZING FACTS



**DUST MAKES A FLAME BRIGHT!** The light given off by a flame is actually radiation from thousands of hot carbon particles suspended in the air. They're the same particles you recognize later as soot and smoke.



**SCRUBS AIR CLEAN!** Air-Maze oil-bath filters literally "scrub" engine intake air clean in a bath of oil. Engines last longer because abrasive dirt and grit can't get in to damage polished pistons, cylinders and rings.



**THIEF IN YOUR CELLAR!** Furnaces with dirt-clogged air-filters rob your home of heat, have to work harder, use more fuel. Stretch your fuel dollars by installing new Dustays®—the filters that hold more dirt without clogging.

**WHETHER YOU BUILD OR USE** engines, compressors, air-conditioning and ventilating equipment, or any device using air or liquids—the chances are there is an Air-Maze filter engineered to serve you better. Representatives in all principal cities, or write Air-Maze Corporation, Cleveland 5, Ohio.

## AIR-MAZE

The Filter Engineers

AIR FILTERS  
SILENCERS  
SPARK ARRESTERS

LIQUID FILTERS  
OIL SEPARATORS  
GREASE FILTERS

would stock up on the wrong things. And they weren't afraid of shortages; they figured they could reorder later if they needed to. Some buyers, too, were plainly holding out, hoping for further price cuts.

• **But Cheerful!**—Nevertheless, if orders were moderate, at least everybody was buying. Retailers have got their inventories into pretty good shape. The National Retail Furniture Assn. estimated store inventories averaged about 3% to 5% higher than a year ago. But many retailers said they were 10% to 15% lower than last year, thanks to the sales pickup in November and December.

Retailers talked cheerfully of spring prospects. For the first six months of 1952 they predicted sales ranging from even with the same 1951 period to as high as 10% ahead. They were hopeful about profits, too. If they bought carefully, and put real steam under sales, they hoped to avoid the heavy markdowns that hurt last year. But they admitted it would take some doing.

The new restrictions on new home construction didn't seem to worry the trade. Close to 80% of furniture sales are replacements, industry leaders estimate.

• **Status Quo!**—In the appliance sections of the markets, there were few striking developments. More automatic defrosting in refrigerators, better functioning automatic washers and driers—and that was about it. Here, too, new restrictions left industry leaders unworried. Stocks of refrigerators and freezers are still big enough to offset curtailed production, they said. They added, however, that inventories in dealers' and manufacturers' hands are no longer excessive.

The scarcest appliances promise to be automatic washers, driers, and dishwashers. Demand is up on these. Shortages of copper and nickel may affect ranges and water heater supplies before the year is out.

• **Pinning Their Hopes!**—Radio-TV manufacturers featured models with larger screens, longer-distance reception—and some lower prices. Manufacturers pinned their hopes for 1952 sales mainly on the replacement market. Industry leaders at Chicago saw little prospect that even the end of the freeze on new TV stations this year would open new markets in time to help 1952 sales. They predicted production of about 4.5-million to 5-million TV sets.

Carpet manufacturers reported a fair volume of ordering at the market. But the industry is still smarting from last year's violent price fluctuations and from heavy retail inventories. Prices were 30% below the March, 1951, peak. But some retailers felt they were still too high for heavy buying.

## Interior Packing

(Military procurement designation for packages used for storage, assembly, sorting, etc. for in-plant use and not for shipment.)



*America's Favorite Mailer...  
... isn't always mailed*

Millions of Mason MailMasters are used for storage, assembly and sorting of small parts and tools. The convenient round wire fastener keeps cover secure.

**65 sizes in stock**

Specification: JAN-P-133

**THE Mason**  
BOX CO.

ATTLEBORO FALLS, MASS.

Write for Catalog and Price List today.

## GLOBE SPRINKLERS



**FIREMEN EVERY 10 FEET**

**A Phone Call Brings Full Details**

The big reduction in **FIRE** insurance premiums is a major reason for installing **GLOBE** Automatic Sprinkler systems. **GLOBE** Automatic Sprinklers discover and stop **FIRE**. Ask our nearest office how much they can save you.

**GLOBE AUTOMATIC SPRINKLER CO.**  
NEW YORK... CHICAGO... PHILADELPHIA  
Offices in nearly all principal cities

**THEY PAY FOR THEMSELVES**



## MARKETING BRIEFS

Major tire makers will fight Federal Trade Commission's quantity discount rule in the courts (BW-Jan.12'52, p126). They'll probably file a petition in federal court now to have the order set aside. Or they may wait till Apr. 1, the effective date, and refuse to comply.

Cigarette distribution by independent food stores and supermarkets together was 30.9% of the total in 1950, says National Assn. of Tobacco Distributors. In 1951 their share was probably bigger (BW-Dec.1'51,p58).

Gasoline price wars have hit Alabama, Philadelphia, and New Jersey. Jersey prices have tumbled as much as 6¢ a gal. recently. To get legislative action, the state's independent dealers say they will close their service stations "indefinitely" beginning Feb. 1. The New York State Council of Gasoline Retailers is trying to get a state law to prevent below-cost sales.

The New York market area—28 counties—has 9.6% of the U.S. population, buys 11%, or \$15-billion, of the nation's retail volume, the New York Times estimates. Its food bill is well over \$5.5-billion a year. The area accounts for 45.5% of the national total for delicatessen stores; 8.2% of household appliances; 19.8% of confectionery; 11.9% of the nation's footwear.

Advertising volume for 1951 came to over \$6.5-billion, McCann-Erickson estimates in Printer's Ink. That's 15% more than 1950. TV had the biggest percentage gain—161.8%; radio the smallest—3.4%. Magazine advertising revenue reached an all-time high of \$511.2-million, 11.7% more than 1950's total, says Magazine Advertising Bureau.

New rescue plan for Schulte's will (1) kick out the men's haberdashery, (2) put in top-selling, nationally advertised drug lines, (3) stock a full line of toiletries, (4) re-emphasize tobacco. The new management group that has taken over the faltering chain (\$643,471 losses in 1951) no longer talks about putting in lunch counters (BW-Oct.13'51,p124).

Coffee vending machines paced growth of the automatic merchandising industry last year with a 105% increase, reports Vend magazine. Ice cream machines were next (49%). Cold-cup beverage machines (184%) sold 1.3-billion drinks last year as against 3.5-billion bottles vended by machine.

BUSINESS WEEK • Jan. 19, 1952

## Played out!



Poor Newton Nulop feels just as rundown as he looks. Like many executives these days, he's being needled by increased figure work and record-keeping.

The new Comptometer is a sure-fire solution to such problems. Depend upon it to save you time, money and confusion!

### THE NEW COMPTOMETER IS MORE ACCURATE!

- 1 Exclusive 3-way error control warns operators by sight, sound and touch when faulty stroke is made! This positive built-in protection assures higher degree of first-time accuracy!
- 2 Giant answer numerals are easy to read. No confusing zeros shown at left of answer—operator can read correctly at a glance.

These and other new features galore make it possible to handle all office figure work with maximum efficiency . . . at minimum cost. Ask your nearest Comptometer representative to demonstrate this speedy and accurate adding-calculating machine.

### THE NEW COMPTOMETER IS FASTER!

- 1 Comptometer's new Floating Touch puts wings on fingers . . . permits operators to work at top speed with minimum of effort.
- 2 Direct action gives instantaneous registration of answers—no motion other than pressing keys required. No superfluous levers or cranks to slow up user.

## COMPTOMETER

REG. U. S. PAT. OFF.

ADDING-CALCULATING MACHINES  
(electric and non-electric models)

Made only by Felt & Tarrant Manufacturing Company, and sold exclusively by its Comptometer Division, 1735 North Paulina Street, Chicago 22, Illinois. Offices in all principal cities.



FELT & TARRANT



Two NEW machines!

NEW YORK & CHICAGO

# FINANCE

## Billion-Dollar Banks, 1951

More Loans  
Less governments  
Stronger capital ratios

BANK	DEPOSITS								RATIO of DEPOSITS to CAPITAL FUNDS (approximate)	
	Amount		Rank		Percent in Loans		Percent in Cash and Gov'ts		'51	'50
	'51	'50	'51	'50	'51	'50	'51	'50		
Bank of America (S.F.)	\$6,816	\$6,192	1	1	53%	53%	42%	43%	17-1	16-1
National City (N.Y.)	5,443	5,131	2	2	38	32	56	63	15-1	16-1
Chase (N.Y.)	5,150	4,871	3	3	43	39	53	61	14-1	14-1
Guaranty (N.Y.)	2,700	2,503	4	5	51	49	58	61	7-1	7-1
Manufacturers (N.Y.)	2,570	2,582	5	4	35	32	67	72	16-1	17-1
Continental Ill. (Chi.)	2,480	2,378	6	7	25	22	77	80	13-1	13-1
First (Chi.)	2,477	2,405	7	6	46	40	56	62	14-1	15-1
Bankers (N.Y.)	1,944	1,642	8	9	47	47	56	57	12-1	10-1
Chemical (N.Y.)	1,775	1,552	9	11	40	39	60	59	15-1	13-1
Security-First (L.A.)	1,737	1,702	10	8	29	26	73	77	16-1	17-1
Mellon (Pittsburgh)	1,687	1,497	11	12	37	29	63	73	8-1	7-1
Hanover (N.Y.)	1,663	1,617	12	10	36	34	69	70	12-1	12-1
First (Boston)	1,495	1,432	13	14	44	44	61	61	12-1	14-1
Nat'l Bank of Detroit	1,471	1,487	14	13	24	21	74	75	21-1	23-1
Bank of Manhattan (N.Y.)	1,253	1,212	15	16	47	50	58	56	15-1	15-1
Irving (N.Y.)	1,241	1,219	16	15	49	44	58	64	10-1	10-1
Cleveland Trust	1,194	1,154	17	17	34	34	60	60	19-1	20-1
American Trust (S.F.)	1,094	1,018	18	18	46	45	53	50	22-1	21-1

N. B.: All figures are for Dec. 31, 1951.

©BUSINESS W.

## Closing the Books on a Good Year

You are the president of the Last National Bank & Trust Co. of Siwash City, making your 1951 report to stockholders. You start off by telling them that last year your bank took in quite a lot more gross revenue from interest on loans and investments, and from service fees, than ever in its 115-year history.

That's because you loaned more money than ever before, and charged a higher rate for it than since the early 1930's. You cut down on your holdings of government bonds, which bring a lower yield than loans.

At the same time, your federal income taxes were quite a bit higher than in 1950. Operating costs went up, too. But your gross revenue had jumped so sharply that you ended up with a little more net profit for 1951 than the year before. Not many industrial companies could say as much.

• **Extra Cushion**—There's another side to the picture. You had to raise some

more capital in 1951. You and your directors figured that the capital-deposit ratio with which you had started the year—about \$1 of capital funds to \$14 of deposits—was a little too slim protection for the depositors. So you sold 1,000 more common shares at \$30 a share, a couple of dollars under the over-the-counter market value, and way below book value of \$45 a share. Nearly all of this was taken up by holders of the existing shares.

Though you didn't point it out in the report, the effect of this was that old stockholders had to put up more money in order to own the same proportion of the bank as they had before. Those that did not take up their rights to buy the new shares found themselves owning a smaller proportion.

What happened to the Last National of Siwash City is pretty typical of what happened to the average U.S. commercial bank during 1951. The banks

as a whole seem to have made a greater dollar volume than ever before. But bank earnings on invested capital are still far from being comparable with industrial earnings.

• **Lag in Value**—The best proof of that is the market value of bank stocks. Most of these sell at discounts of from 10% to 30% below book value—which no longer is typical of very many industrial shares.

The answer is simple enough: Investors can get a higher return on equity money invested in industrial companies than they can from banks. Naturally, stock market prices reflect that—even though bank shares, over the long run, may be the more conservative.

The reason for the relatively low yield on capital invested in banks is this: Since 1933, government monetary policy has kept the price that banks charge for use of their money at an artificially low level. And in recent

years the average rate of interest banks earn on their assets has been fairly low, because banks have held relatively large amounts of low-yielding government securities and relatively small amounts of higher-yielding loans.

• **Low Interest**—In the 1930's, the government tried to stimulate recovery by pushing interest rates down. During World War II, it kept them down because it had to borrow vast sums for the war effort. Afterwards, it had such a big debt that it continued its cheap-money policy: (1) to hold down debt charges, and (2) to protect holders of existing government securities and simplify refunding of maturing issues by keeping the bond market stable.

That has meant relatively poor earnings on bank capital. If you need more proof, you might consider what an oddity a new bank is these days. According to the American Banker, only 64 commercial and savings banks opened in the U.S. during 1951. There has been a steady downtrend in bank openings since 138 were started in 1946.

• **Vanishing Banks**—At the same time, banks are disappearing from the scene via mergers. Banks that want new branches find it cheaper to buy up existing banks and use their premises. Stockholders of banks with bleak earnings prospects are continually tempted to cash in because they get a better price in a merger than in the open market. And this often means a capital gain to the holder. Since their bank's assets are extremely liquid, compared to assets of industrial concerns, the buyer figures to make out all right in taking them over at book value.

That's why the number of U.S. banks is slowly declining, while the economy is growing. Latest figures show 14,631 banks, a few more than the 14,585 that were operating at the close of 1946. But there were 15,035 banks at the end of 1939.

• **Excess Profits**—The unpegging of the government-bond market last spring made a big difference in banking. It meant higher money rates, and higher gross operating earnings for banks. But if left a lot of banks with portfolio losses. Moreover, higher corporate tax rates—plus higher operating expenses—swallowed up most of the gain in gross earnings. A few banks paid excess profits tax, as well.

For instance: Chase National Bank, No. 2 in New York and No. 3 in the U.S., set aside \$25.5-million for taxes in 1951, compared to \$14.9-million the year before. Its profits after taxes rose only slightly, from \$20.9-million to \$21.5-million.

Chemical Bank & Trust Co., New

*This advertisement is neither an offer to sell, nor a solicitation of an offer to buy any of these securities. The offering is made only by the Prospectus.*

**NEW ISSUE**

January 9, 1952

## 375,000 Shares Kaiser Aluminum & Chemical Corporation

**5% Cumulative Preferred Stock**  
(\$50 Par Value)

Convertible through 1961

**Price \$50 per share**  
plus accrued dividends from date of delivery

*Copies of the Prospectus may be obtained from any of the several underwriters, including the undersigned, only in States in which such underwriters are qualified to act as dealers in securities and in which the Prospectus may legally be distributed.*

**The First Boston Corporation**

**Dean Witter & Co.**

**Blyth & Co., Inc.**

**Eastman, Dillon & Co.**

**Glore, Forgan & Co.**

**Goldman, Sachs & Co.**

**Hemphill, Noyes, Graham, Parsons & Co.**

**Paine, Webber, Jackson & Curtis**

**Schwabacher & Co.**

**Union Securities Corporation**

**Wertheim & Co.**

**White, Weld & Co.**

**Allen & Company**

**A. C. Allyn and Company**

**Blair, Rollins & Co.**

**Central Republic Company**

**Hallgarten & Co.**

**Hayden, Stone & Co.**

(Incorporated)

**Hornblower & Weeks**

**W. C. Langley & Co.**

**Lee Higginson Corporation**

**Shields & Company**

**Shuman, Agnew & Co.**

**BUYERS OF INSURANCE FOR  
COMMERCE AND INDUSTRY  
SINCE 1845**



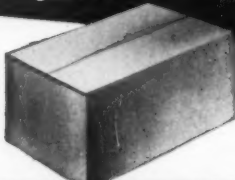
**Your business insurance  
program courts disaster when  
it fails to reflect changing  
economic conditions.**

**JOHNSON & HIGGINS**

**INSURANCE BROKERS — AVERAGE ADJUSTERS**  
**Employee Benefit Plan Consultants**  
**63 WALL STREET • NEW YORK 5**

**New York • Chicago • San Francisco • Los Angeles • Detroit • Cleveland • Philadelphia  
Pittsburgh • Buffalo • Seattle • Vancouver • Winnipeg • Montreal • Toronto • Havana**

**WANTED:  
A BETTER  
SHIPPING  
CONTAINER**



**LINER-JOINT**

The problem of producing a shipping container that would better protect goods weak in end-to-end support was answered by Liner-Joint, the seamless corrugated shipping container. David Weber Co. produced a container with no tapes or stitches to pull, tear or weaken corners, and with horizontal corrugations to give the extra strength wanted end-to-end. Liner-Joint was a practical and expert solution to the problem at hand... and one of the few new container developments in 25 years.

But there are other container problems. To solve these David Weber Co. ingenuity is applied through an organization that completely coordinates every step in the manufacture of its product... beginning with the selection of trees for pulp and continuing to the completed containers. Our resourcefulness, built by many years experience, and the integrated production facilities we provide guarantee constant quality of product. This organization is available to assist you in solving your container problems.



CORRUGATED SHIPPING CONTAINERS

**DAVID WEBER CO.**

3500 RICHMOND STREET  
Philadelphia 34, Pa.  
KRAFT MILL: WEST POINT, VA.

York, had operating income of \$34.2-million, up 33% over 1950. But it had to set aside \$7-million for income taxes, almost exactly double 1950's tax bite. Net earnings rose only from \$7.7-million to \$8.4-million.

While income taxes of most banks climbed, a few were able to cut potential tax payments by taking tax losses on securities. For instance, J. P. Morgan & Co., Inc., reported that it will pay income tax of \$545,000 for 1951, compared with \$1,028,000 in 1950. This is in spite of the fact that net operating earnings before income tax were up almost 38%.

National Bank of Detroit reported that it was able to cut 1951 income and excess profits taxes "materially" from what it would have otherwise had to pay, by means of "advantageous changes in the U.S. Government securities account."

• **Tax Sales**—While neither bank went into details, it seems apparent that both have been selling governments at a loss, which of course is deductible for income tax purposes. When a bank makes tax sales of governments, it is often possible to switch into issues of almost the same maturity as the bonds sold, and thus avoid seriously upsetting a carefully spaced schedule of maturities. Or else the money can be used to make additional loans.

The tax angle is also one reason why so many banks raised new equity money during 1951 (BW-Jul.14'51, p11). Where banks seemed likely to have to pay excess profits tax, an increase in capital gave them a broader EPT exemption.

• **Added Risks**—Probably the most important reason why banks went after new capital was that they felt the need of a larger capital cushion for their liabilities. A higher proportion of their assets were going out into loans, which are riskier than government bonds. And after the Federal Reserve unpegged government bonds, even these "riskless" assets were no longer as liquid as they had been.

Banks were willing to pay a fairly steep price for this new equity money. For instance, New York's National City Bank, Mr. Big in the East and the No. 2 U.S. bank, offered 1-million common shares last spring at \$40 a share. Book value of the existing stock was about \$51.53. Nearly all of the new stock was taken up by holders of existing shares.

Just this week, stockholders of Republic National Bank of Dallas were to vote on a plan to offer 150,000 new shares at \$40 a share. Present book value of the stock—if you include net worth of subsidiary Republic National Co.—is about \$60 a share. If the new stock is issued, book value would be \$51 a share.

## Hotel Shopping

The hotel chains are snapping up properties while they still can. And some owners are ready to sell.

Even with today's high real estate prices, hotel and real estate operators are still going after hotels. Government restrictions make it unlikely that any new hotels will be built for some time to come, so expansion-minded hotel chains are picking up new units while the picking is good. They want to cash in on the expected uptrend in hotel business.

Chains that want to add more units can still find some good-looking properties on the market. Owners in some cases may figure that prices have reached their peak. But probably more important is the fear that long-term capital-gains tax rates will go higher. The rate went from 25% to 26% on Jan. 1. And the fear of another stepup in the future may encourage some other property owners to take their profits in 1952.

• **Sheraton-Cadillac**—Late in November Manufacturers Trust Co. of New York sold its 70% stock interest in Book-Cadillac Corp. to Sheraton Corp. of America for about \$4.7-million. Book-Cadillac owns the 29-story Detroit hotel of the same name. Manufacturers Trust had acquired the stock involuntarily in 1941 through a reorganization.

Sheraton, which says that the new hotel gives it more rooms than any other hotel chain in the world, has already changed the name to Sheraton-Cadillac. It will soon offer to buy the remaining 27,000 shares of stock for about \$1.1-million.

• **Biltmore**—Just before Christmas two Dallas real estate men, Leo F. Corrigan and Fletcher G. Lippitt, bought nearly all the stock of Los Angeles Biltmore Hotel Co. for more than \$124-million. Equitable Life Assurance Society loaned the buyers \$74-million, secured by a mortgage on the property. The long-term lease on the hotel held by Baron Long won't be disturbed.

On the same day, Knott Hotels Corp., another big chain, announced it had bought Washington's 300-room Congressional Hotel for \$2-million. The Congressional, built in 1948, is one of the few hotels built since 1929.

This was the seventh hotel Knott bought during 1950-1951. All of them are outside New York, where most of Knott's holdings used to be concentrated. Knott executives say they have several other deals on the fire as well. The reason: to get more of their eggs out of one basket.





## **Steel has a hide that stretches too**

The zinc-coated steel used by manufacturers of home laundry dryers, home freezers and other products, needs a tough "hide" as flexible as an alligator's so it won't flake off when severely formed or drawn.

That's why Armco developed ZINCGRIP. This specially processed sheet has a coating that *s-t-r-e-t-c-h-e-s* with the steel. It provides unbroken rust protection — even at seams and edges.

That's important to you — because it eliminates a costly source of rejects. And with this saving you get the sales value of an extra-durable zinc coating. Field tests show that the special coating on ZINCGRIP gives longer protection against rusting in atmospheric service than equal-weight coatings on regular galvanized sheets.

ZINCGRIP is only one of a whole family of Armco Special-Purpose Steels. Each has been developed to help manufacturers make more attractive, longer lasting products for home and industry.

Many Armco Steels are now going to meet essential defense needs. But you'll want to consider these *extra-quality* steels when you make your plans for the future. Remember, too, that the Armco triangle trademark carries with it the consumer acceptance won by thirty-seven years of national advertising.

### **MORE SCRAP FOR MORE STEEL**

More steel scrap is needed for top steel production. The new furnaces the steel industry is building cannot be operated at capacity with the present scrap supply. To help the nation—and yourself—sell your steel scrap now!

**ARMCO STEEL CORPORATION**

MIDDLETOWN, OHIO, WITH PLANTS AND SALES OFFICES FROM COAST TO COAST  
THE ARMCO INTERNATIONAL CORPORATION, WORLD-WIDE



*This announcement is neither an offer to sell nor a solicitation of an offer to buy any of these Shares. The offer is made only by the Prospectus.*

Not a New Issue

**415,060 Shares**

## Kellogg Company

**Common Stock**  
(Par Value 50¢ a Share)

**Price \$23.75 a Share**

*Copies of the Prospectus may be obtained from only such of the undersigned as may legally offer these Shares in compliance with the securities laws of the respective States.*

**MORGAN STANLEY & CO. CLARK, DODGE & CO. GLOBE, FORGAN & CO.  
BLYTH & CO., INC. THE FIRST BOSTON CORPORATION  
GOLDMAN, SACHS & CO. LEHMAN BROTHERS SMITH, BARNEY & CO.  
STONE & WEBSTER SECURITIES CORPORATION WHITE, WELD & CO.**

January 9, 1933.

(Advertisement)



### Plans Repeat Visit to British Industries Fair

"Of the many trade fairs and markets I have attended in this and other countries during my merchandising career, none impressed me as much as the 1931 British Industries Fair," said Mr. Walter, President of John W. Walter, Inc., New York, wholesale distributors of electrical appliances. "It far surpassed my expectations and, needless to say, I plan to attend the BIF again this year."

British Industries Fair—London and Birmingham, May 5-May 16. For details write or telephone your nearest British Consulate or; Commercial Department, British Embassy, Washington 5, D. C.

## WANTED MORE IRON AND STEEL SCRAP... OF ALL KINDS!

Steel mills and foundries need more scrap.

Not just "production" scrap from metal-fabricating plants... but also all sorts of *idle* iron and steel—from all types of plants.

Search your plant for this *idle* metal... work with your local scrap dealer to increase supplies of badly-needed iron and steel scrap.

### What to look for...

obsolete machines, tools and equipment, no-longer-used jigs and fixtures, worn-out or broken chains, wheels, pulleys, gears, pipe, tanks, drums and abandoned metal structures. Non-ferrous is needed, too!



**McGraw-Hill  
PUBLISHING COMPANY, INC.**

330 WEST 42nd STREET • NEW YORK 36, N.Y.

## Bank Shuffle

**Switch to state charter allows Utah national bank to boost its loan limit to 15% of capital and surplus.**

Many bankers fret and fume about federal regulations, but most of them swallow their gripes rather than give up their national charters.

Walter E. Cosgriff is one exception. A one-time Reconstruction Finance Corp. director, Cosgriff is making a state bank out of his family-controlled Continental National Bank & Trust Co. of Salt Lake City.

That is his solution to quarrels with the Comptroller of the Currency.

• **Increase in Assets**—The comptroller, who regulates national banks, refused to allow Continental to value its bank building at more than \$900,000. Cosgriff thinks the building is worth a lot more. If he could persuade bank authorities to boost his valuation, his bank could make larger loans to individual borrowers. An increase in assets, without a corresponding rise in liabilities, means an increase in capital funds on the other side of the balance sheet. A national bank can't lend any one customer more than an amount equal to 10% of capital and surplus.

Cosgriff knew that he could boost his loan limit if he shifted his institution to state bank status. A Utah state bank can lend one borrower up to 15% of capital and surplus. And the Utah banking department might well be more liberal in its valuation of the bank building, which has been independently appraised at \$2.3-million. So, a while back, Cosgriff applied to the Utah authorities for permission to convert. He has just received the necessary O.K.

• **Old Bone**—The argument about valuation of the bank building is the last flareup in a long feud between Cosgriff and the comptroller. Cosgriff, who served as a director in the last months of the old RFC, charges that the comptroller has been putting the heat on him to raise more capital for his bank. At yearend, Continental had \$54.8-billion in deposits, and a capital-deposits ratio of \$1 in capital funds to \$23.71 in deposits. That's pretty slim (page 146).

• **Easy Divorce**—Until recently, Cosgriff would have had to exercise some legal hocus-pocus before he could drop "National" out of his bank's name. Continental would have had to go into voluntary liquidation, sell its assets to a successor state bank.

Under a new law passed last August, a national bank can convert simply by

getting permission from its state banking department. Continental is the second bank to do this since the law was passed. (In the same period, three state banks have shifted over to national status.)

Cosgriff says the other banks that his family controls in the mountain-state area won't be affected.

## Tax-Ridden Hoppy To Unsaddle Enterprises

Rustlers were never a match for Hopalong Cassidy, but the tax collector could—and did—beat him to the draw. Hoppy, who is William Boyd in private life, wants to sell his William Boyd Enterprises, which grossed about \$1-million in royalties last year. Reason is that operating expenses and taxes are taking too much of his income. Boyd would rather sell the whole shebang and take a capital gains tax on his profit. His asking price: about \$8-million.

The William Boyd Enterprises collects royalties on the use of Hoppy's old films, and gets a cut on Hopalong Cassidy comic strips, comic books, records, and merchandising gimmicks. Also involved is a radio program that NBC has been running (the contract on this expires this spring).

• **Package Deal**—Hoppy and his manager, Bob Stabler, have already tried to peddle the enterprises to NBC, but it looks now as if NBC won't buy the whole package. Probably it will take on only the TV film rights and the rights to produce a Hoppy radio program. The films involved are Hoppy's 54 old full-length movies plus 12 other full-length pictures on which he has bought TV rights. These are still showing in theaters, and won't be available to TV until next year.

Hoppy probably would be taxed at the capital-gains rate if he sold the films to NBC. Observers think he is already being taxed at the capital-gains rate on royalties from his commercial tieups.

• **Breakdown**—Here's how the 1951 income of William Boyd Enterprises breaks down:

- \$600,000 net from such commercial tieups as cowboy suits, guns, soap, and the like.
- About \$350,000 from use of his pictures on TV.
- \$55,000 from comic books.
- \$7,000 from records.

That adds up to about \$1-million gross. But after the company pays staff expenses, Boyd apparently still has to split profits with others who own pieces of the company. According to manager Bob Stabler, he came out with \$728,000 before taxes. After taxes, he figures to have \$140,000 left.

# Production News

ABOUT *Lusol*.—THE ALL-CHEMICAL METAL-WORKING SOLUTION

FROM F. E. ANDERSON OIL COMPANY • PORTLAND, CONNECTICUT

## LUSOL OUTCOOLS, OUTPRODUCES ALL OTHER COOLANTS

You can get far greater production from your shop, and you can do it without adding a single machine or tool or man, simply by switching to Lusol. You can prove these facts about Lusol to your own satisfaction in your own plant—just as thousands of others have already done.

Lusol is a clear, all-chemical concentrate that is diluted with water and used in the coolant system of almost every type of machine tool—lathes, grinders, milling machines, saws, broaches, even rolls and presses. In each of these operations we have cases of increases in tool life as high as 500% and even higher. Less down time for tool dressing means greater production. Work stays cooler because Lusol is a super-coolant. Oilless Lusol reduces the surface tension of water so it penetrates to the very cutting edges of the tools, keeps grinding wheels from loading up.

Workers like Lusol! A mild combination of chemicals, milder than most toilet soaps, Lusol by itself can't become foul smelling or cause dermatitis. Workers' hands, clothes and the surrounding floors stay clean and non-oily. Frequently, parts made with Lusol need not be degreased before painting, plating or assembly. While not a rust preventive, Lusol reduces the possibility of rust on parts that are stored between stages of production.

## users say\*

### case histories of Lusol at work

**A CONVEYOR MANUFACTURER**—"8,000 forged steel brackets produced per broach grind with Lusol in the machine, compared to the previous 3,500 pieces. Doubled production and less down time for changing broaches for resharping."

### A FARM EQUIPMENT MAKER

"Have had outstanding success on deep drilling in balancing crankshafts. Drill  $\frac{3}{16}$ " holes and, where we could only go  $2\frac{1}{2}$ " deep, we now go as deep as  $3\frac{1}{2}$ " with Lusol."

### A SUBCONTRACTOR—"No

greasiness on the finished parts, so we bundle them for shipment just as they come off the machines. Some have to be given a prime coat of paint; we simply wipe them off with a cloth and then spray them."

### A CRANKSHAFT MANUFACTURER—"We wash \$5 worth of

grinding wheel down the sewer every time we dress a wheel. Since we adopted Lusol for our entire grinding department, we've saved an awful lot of money by reducing the number of dressings our wheels require."

\*Users' names furnished on request.



## FREE BOOK

Get complete facts about Lusol by writing for this 20-page booklet. It contains information on machine cleaning, maintenance of Lusol solutions, elimination of dermatitis and odor in machines, plus many case histories of Lusol at work. Write F. E. Anderson Oil Company, 211-A, Portland, Conn.

## How a tiny shop

grew into

## the world's largest producer of industrial rubber

### THE STORY OF THE FIRESTONE COMPANY'S HALF-CENTURY GROWTH

HERE is the 50-year saga of the growth of the Firestone & Rubber Company — starting in the horse-and-buggy days of 1900 and progressing through the era of the modern automobile. The book focuses on Harvey Firestone, the company's founder, and his sons and associates — following them through every stage of the company's development, the solution of its problems, and the fulfillment of its objectives. It starts with the beginning of the company (when 400 shares of common stock at \$100 per share were issued) . . . and takes you through the present-day scope of the Firestone Company, which includes thousands of employees . . . many fully-equipped, modern factories . . . and plantations in Liberia.

Just Out

## THE FIRESTONE STORY

A History of the Firestone  
Tire & Rubber Company

By ALFRED LIEF  
437 pp., 47 illus., \$4.50

As fascinating as an absorbing novel, this book tells how a small shop making buggy tires grew into the industrial giant that today manufactures a large portion of the nation's rubber products. It traces the company's history through an amazing period of American progress—captures the spirit and tempo of the country's industrial expansion—and gives a richer understanding of the essence of our nation's greatness.

#### CONTENTS:

1. The Beginning
2. Enter the Pneumatic
3. The Role of Rims
4. In Quest of Mileage
5. Human Relations
6. "We Are All One"
7. A War and Its Aftermath
8. Problems of Production
9. Extending the Market
10. Happy Anniversary
11. Liberia and Restriction
12. Planning for Strength
13. Selling in a Depression
14. Self-help to Recovery
15. Labor Unrest and Peace
16. New Horizons
17. Early Work for Defense
18. Creating a Rubber Supply
19. Every Plant an Arsenal
20. Working Together for Freedom
21. Liberia and the Offensive
22. Transition to Peace
23. Production and Social Values
24. Fiftieth Anniversary Year

It shows you Harvey Firestone, the man, and

his vision of greater usefulness to society—of the advances in motoring, agriculture and transportation which kept up with the pace he set for the rubber industry. It unfolds the day-by-day story of the Firestone Company — of its successes and problems—of how it contributed to American welfare during two World Wars and a depression.

It gives you intimate glimpses of the men with whom Harvey Firestone associated — men like Henry Ford, Thomas A. Edison, John D. Rockefeller, and James C. Owsen. It is a revealing drama of struggle for a free competitive society — with a sense of adventure and a spirit of progress as large as his setting, which ranges from busy Akron factories to Liberian rubber plantations.

SEE THIS BOOK 10 DAYS FREE

McGraw-Hill Book Co.,  
330 W. 42nd St., NYC 36

Send me Lief's **THE FIRESTONE STORY**, for 10 days' examination on approval. In 10 days I will remit \$4.50, plus four cents for delivery, or return book postpaid. (We pay for delivery if you remit with this coupon; same return privilege.)

(Print)  
Name.....  
Address.....  
City.....Zone.....State.....  
Company.....  
Position.....NW-1-18-52

This offer applies to U. S. only.

## FINANCE BRIEFS

U. S. Government obligations owned by the public and falling due within 12 months now total \$59.6-billion. A year ago such maturities added up to only \$51.8-billion.

ICC has agreed to let Atlantic Coast Line dispose of a new \$22.4-million long-term bond issue at private sale. Several life companies have agreed to pay par for bonds carrying about a 4½% interest rate. Coast Line had doubted that competitive bidding—normally required for new rail offerings—would produce better terms due to recent "weak and unfavorable" rail bond markets.

Building and loan dividend rates in Los Angeles appear headed for 3½%. Lately 12 local associations upped payments to 3½% from 3%. Competition for available savings, heavy building, and the recent nationwide uptrend in mortgage loan rates are behind the move.

Maryland legislators are expected to reduce the state's personal income tax rate 15% soon. The reason: a current state surplus of \$11.9-million.

Some 77 of the 150 prominent 1950 new common stock offerings—or 51%—at yearend were selling under their original price to the public, New York's Shields & Co. reports. Best performers were the new utility issues; 71%, or 24 of the 34 in that group ended the year above offering prices.

At least \$700-million of new U. S.-guaranteed, tax-exempt, local housing authority bonds will be offered publicly in 1952. That, the Public Housing Authority says, includes the \$145-million sold this week.

Rhode Island is considering a new bond issue to set up a \$1-million revolving fund to build industrial plants for lease to private companies at cost. The plan (which some authorities term unconstitutional) would hit southern municipalities that are luring new industry with "cheap rent" plants financed by sale of "industrial revenue" bonds (BW—Sep. 1'51,p102).

Bonds to finance construction of a new \$84-million bridge or \$107-million tunnel connecting Philadelphia and Camden, N. J., may be offered in 1952 by Delaware River Joint Commission. Type of construction and exact location must first be approved jointly by New Jersey and Pennsylvania governors.



### Leading Motor Repair Shop Finds KLIXON Protectors Stop Motor Burnouts 2 Ways

CONCORD, N. H.: Mr. A. S. Tracy, owner of the largest motor repair shop in his area, speaks from many years of experience with motors.

"I find that KLIXON Overload Protectors have given very good protection on motors that come into our shop. The fact that they operate on motor temperature as well as current makes them doubly effective in preventing motor burnouts."

The KLIXON Protector, illustrated, is built into the motor by the motor manufacturer. In such equipment as refrigerators, oil burners, washing machines, etc., they keep motors working by preventing burnouts.

If you would like increased customer-preference, reduced service calls and minimized repairs and replacements, it will pay you well to ask for equipment with KLIXON Protectors.

Manual reset  
**KLIXON**  
SPENCER THERMOSTAT  
Div. of Metals & Controls Corp.  
2401 FOREST STREET  
ATTLEBORO, MASS.

# Talide

(TUNGSTEN CARBIDE)

## TRIPLES YOUR PRODUCTION

DIES

BAR  
STOCK

BLADES

TOOLS

BUSHINGS

ROLLS

Millions of small metal particles, finer than face powder, are fused together under terrific heat and pressure to make TALIDE the world's hardest metal.

Many times more durable than steel, it adds years of life to the wearing edges of tools, dies, machinery and equipment.

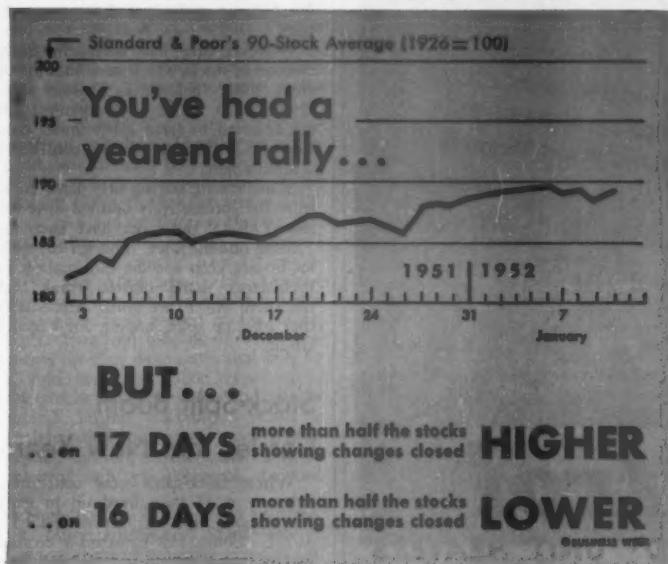
Hard as a diamond and almost indestructible, it triples output per man and per machine.

Write for Catalog 50-G.

**METAL CARBIDES CORPORATION**  
YOUNGSTOWN 7, OHIO  
SINTERED CARBIDES • HOT PRESSED CARBIDES



# THE MARKETS



## Yearend Boom Squibs Damply

Rally occurs as usual, but not on a broad front. Some analysts see a warning in the market's sluggish reaction to its period of "automatic" strength.

Santa Claus came around to Wall Street this year, as usual. But the good saint didn't drop off very many presents. Some that he did leave are not making much of a hit.

Take a look at the way the rally has been acting (chart). From the end of November, Standard & Poor's 90-stock average moved up about 4.3%. But the move was never a broad one.

During the 33 trading days shown on the chart, plus signs show only a slight advantage over minus: On 17 days, more than half of the Big Board stocks that showed changes moved upward. On 16 days, more than half of the stocks showing changes closed lower.

• **Preferreds**—Of course, one major reason for this sluggish slowing is that about 30% of the issues listed on the New York Stock Exchange are preferred stocks. Prices of preferreds, naturally, have been moving downward as interest rates have hardened (BW—Dec. 1 '51, p. 130).

Even allowing for this, the market's lack of response has impressed a good many analysts. After all, they figure, the yearend rally should be a pretty au-

tomatic affair. When it fails to come through with some strength, that's a warning sign.

• **Spare Cash**—A yearend rally should be automatic, because people have "re-investment funds"—cash from yearend dividends and other sources. Ordinarily, they should be putting a lot of this cash back to work in stocks.

So far, though, investors in general haven't been rushing out to market to buy stocks. Not once during the whole yearend rally to date has daily volume of trading on the Big Board reached 2-million shares.

It could be that many investors are holding their cash in bank deposits or short-term government securities, figuring that stock prices will be lower later on this year. It's quite probable that more of this cash than usual is being held out of the stock market because of the higher individual income tax rates: Investors want to have the money to pay tax claims.

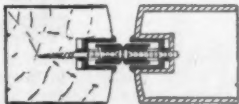
• **Speculation**—Analysts also point out that all is quiet in the penny arcade. The high-grade shares have been doing much better than the speculative low-price shares lately. The joy-riding pub-

## MICHAELS adjustable ASTRAGALS

KEEP DOORS CLOSED... help to eliminate drafts and air currents, and to keep out dirt and dust. Astragals are made of bronze, aluminum or nickel, and are available in several styles. They are simple, practical, sturdy, easily installed and adjusted. Here are two of the most popular types.



Type "A" may be applied to either wood or hollow metal bevel doors. May also be used as a stop head.



Type "E" is designed for hollow metal or wood double acting doors. Both types may be used at the bottom of doors.

Another important advantage of Michaels Adjustable Astragals is that they compensate for the expansion and contraction of doors. Write for folder illustrating the complete line. Michaels manufactures many non-ferrous metal building products. So whatever you need, if it's made of non-ferrous metal, write us.

### MICHAELS PRODUCTS

- Bank Screens and Partitions
- Welded Bronze Doors
- Elevator Doors
- Store Fronts
- Lettering
- Check Desks (standing and wall)
- Lamp Standards
- Marqueses
- Tablets and Signs
- Name Plates
- Astragals (adjustable)
- Stair Railings (cast and wrought)
- Wrought and Cast Radiator Grilles
- Grilles and Wickets
- Kick and Push Plates
- Push Bars
- Cast Thresholds
- Extruded Thresholds
- MU-CO Parking Meters
- Museum Trophy Cases

**THE MICHAELS ART BRONZE CO., INC.**  
232 Scott Street, Covington, Kentucky

Manufacturers since 1870 of many products in Bronze, Aluminum and other metals

*Nothing could be cleaner!*

MODERN, SPOTLESS  
COCA-COLA OFFICE AND  
BOTTLING PLANT DuQuoin, Ill.



## <sup>®</sup> Janitrol

**GAS-FIRED\* UNIT HEATERS  
SERVE EVERY DEPARTMENT**

In this typically spotless, 1½ million dollar Coca-Cola building, 45 Janitrol Unit Heaters deliver dependable, clean, automatic gas heat where it is wanted . . . when it is wanted. The complete Janitrol line of sizes and model types made it practical to standardize on Janitrol throughout the entire plant . . . for instance, a corner of

the stock room only required a 50,000 Btu/hr. Unit, while a 450,000 Btu/hr blower heater was required in the huge basement storage room.

Whatever your heating needs, one unit or many, you can depend on Janitrol equipment and engineered installation to bring you low-cost, carefree heating.

\*Janitrol Unit Heaters operate on natural, manufactured, mixed or LP Gases.



**Surface Combustion Corporation • Toledo, Ohio**  
Other Products—Surface Industrial Furnaces, Kathabar Humidity Control Systems, Aircraft Heaters

lie isn't buying its traditional favorites. A lot of brokers feel that no real bull move can get under way without a decided rise in the speculative temperature.

However, there have been some fancy run-ups in stocks which have announced stock splits (below), as well as some attention to shares of companies that are believed to have splits under consideration. This is always considered a bullish sign.

Some recent buying may have come from the speculatively minded little fellow. Odd-lot purchases have been exceeding odd-lot sales. Though the odd-lot houses keep specific information to themselves, many analysts think that the small buyers are going after stocks that may be split, hoping for a quick killing.

## Stock-Split Boom Carries Into New Year

Where stock-splits were concerned, last year more than lived up to early expectations on it (BW—Sep. 8 '51, p131). Some 150 companies created two or more shares out of each one previously outstanding. That's half again as many companies as engineered stock-splits in 1950. The records show that of all previous years, only 1946 produced more common split-ups than did 1951.

These figures tell only part of the story. More than 30 additional corporations got the same result through stock dividends equaling or exceeding the existing common capitalization, declaring stock dividends ranging from 100% to 350%.

So far, there are no signs that this trend has run its course. According to Wall Street reports, 1952 could be just as active for split-ups as was 1951. All that's needed, Streeters say, is a fairly buoyant stock market.

• **Two Whoppers**—This year got off to a fast start on two counts: (1) American Can Co.'s 4-for-1 splits of both its preferred and common stocks; and (2) U. S. Rubber Co.'s 3-for-1 split of common. U. S. Rubber is the only member of the "big four" tire makers that didn't split its common shares in 1951. Both companies announced last week that they would put these plans to a vote at their stockholders' meetings in April.

American Can's split-up of its preferred stock will proceed along orthodox lines. Stockholders will merely be asked to authorize dividing each share of the \$100-par \$7 preferred stock into four of new \$25-par stock paying a \$1.75 dividend.

American Can's common, split-up will vary from the usual pattern. In-

volved will be both a direct stock-split and a stock dividend. First off, each of the company's presently outstanding \$25-par common will be split up into two new shares of \$12.50-par. Then a declaration of a 100% dividend on the new shares will follow. Stockholders will wind up holding four new shares for one old.

U.S. Rubber also plans a split-and-dividend operation. It will start off by giving stockholders two shares of a new \$5-par common for each share of the present \$10-par, then declare a 50% stock dividend on the new shares. The net result will be equivalent to a 3-for-1 split.

• **No Tax Advantage**—Wall Streeters' first guess was that these split-and-dividend plans were pegged to tax advantages. However, officials of both companies say they were motivated only by a desire to extend public ownership of the stocks, and to reduce the size of capital surplus accounts. While a straight stock-split would have accomplished the former, the latter could be achieved only via the stock dividend route.

• **Shot in Arm**—However, Wall Street sees other possibilities. Stock-splits allow management to restate earnings and dividends on the basis of the larger number of new shares. For example, Wall Street expects American Can to report net of around \$10 a share for 1951 on the old common (out of which dividends of \$5 a share were paid); on the new 4-for-1 basis, net would be \$2.50 a share and dividends \$1.25. U.S. Rubber's per-share net of perhaps \$14 and dividends of \$6 for 1951 would become \$4.66 and \$2.

Split-ups generally have had a stimulating effect on the market for the shares involved. Not only do they make a lower-priced stock available to more people, but more often than not split-ups have been followed by more liberal dividend rates on the new shares.

The common stocks of American Can and U.S. Rubber have shared in this popularity. Can's shares, early this week, were quoted around \$126.50, up about 10% from their yearend level. Rubber's common hit \$86, about 11% above final 1951 prices.

**The Pictures**—Cover by Dick Walters. Fran Byrne—143; Bill Clinkscales—92 (bot.); Ford News Bureau—25; Harris & Ewing—98; Int. News—40; Ed Nano—52, 56; Julius Shulman—92 (top), 93, 94; Three Lions (Almasy—168, 169), (George Pickow—140, 141); U.P.—27; U.S. Atomic Energy Commission—26; Wide World—28; Dick Walters—32, 33, 34, 130, 131, 132, 135.



## breaking bottlenecks

**Bottlenecks in figure work** can seriously cripple the planning and producing that are the mighty sinews of our defense efforts.

You can break this figure work bottleneck quickly and easily with the all-purpose figuring tool — the Remington Rand *Printing Calculator*. It offers a combination of features — *in one machine* — that assures maximum per-operator-hour production of figure work. Return the coupon below — let us show you how the *Printing Calculator* can increase figuring efficiency in every department — and save you time and money.



### THE REMINGTON RAND PRINTING CALCULATOR

- Short-cut Multiplication • Automatic Division
- Rapid Addition and Subtraction
- Simplified 10-key Keyboard • Plus Printed Proof of Accuracy • ALL IN ONE MACHINE

## Remington Rand

Room 2379 315 Fourth Avenue, New York 10, N. Y.

Gentlemen: Please send complete information on the *Printing Calculator* showing how it can "break the bottleneck" in figure production.

Name \_\_\_\_\_ Title \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

You're kidding!  
Can Patapar really  
be that good?



Maybe it *is* hard to believe that any paper could have all the unique qualities of Patapar Vegetable Parchment. But it's true. Patapar has high wet-strength. It resists grease. It's odorless, tasteless and boil-proof.

#### Likes hard jobs

As a packaging material, plain or colorfully printed, Patapar protects perishable foods such as butter, cheese, bacon, margarine, poultry, fish. It is used for putty wrappers, drafting paper, separators for special tiny batteries, rubber mold liners and many other industrial applications.

#### 179 different types

Standard weights and types of Patapar are ideal for most uses. When certain extra qualities are specifically desired, we recommend special types. In all, there are 179 different types of Patapar tailored to meet exacting requirements.

To find out how Patapar might help you in your business, write for sample and Booklet T, "The Story of Patapar."



Look for this  
Keymark on  
Patapar  
food wrappers

# Patapar

WET STRENGTH  
GREASE RESISTING PARCHMENT

**Paterson Parchment Paper Company**  
Brook, Pennsylvania

West Coast Plant: 440 Bryant St., San Francisco 7  
Sales Office: New York, Chicago

Headquarters for Vegetable Parchment since 1885

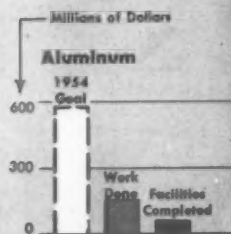
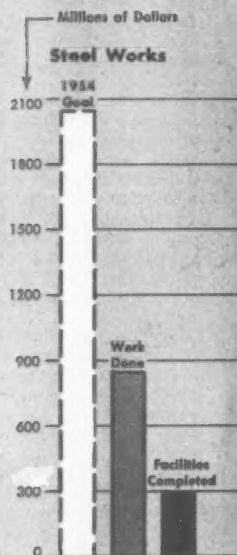
## DEFENSE BUSINESS

**1** Goal for expansion under certificates of necessity is \$9.9-billion by 1954

**2** \$4.6-billion of that work has been done now

**3** \$2.3-billion of new facilities are in use or ready to go

**4** Here's



## DPA Report

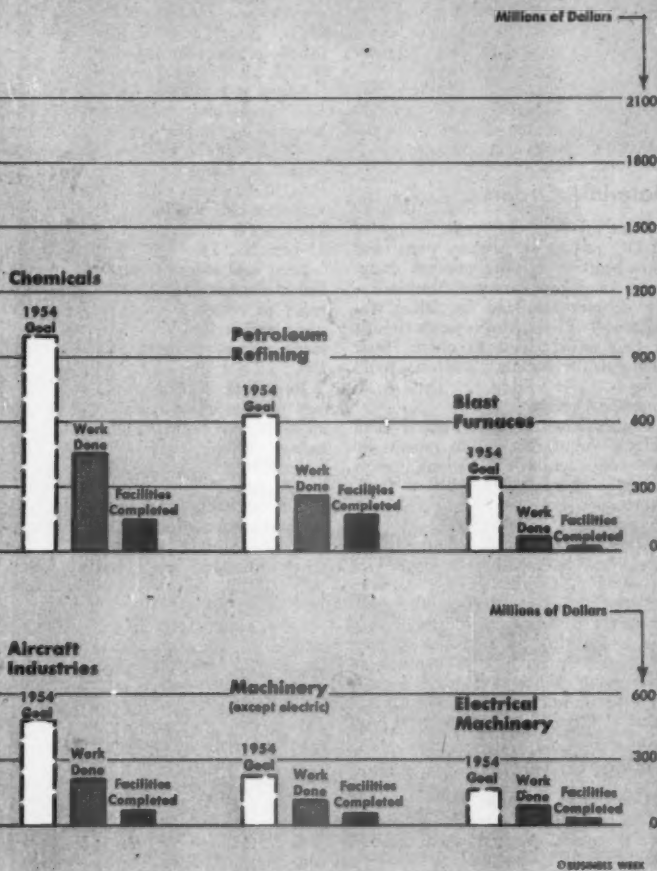
The Defense Production Administration has issued its first "progress report" on \$9.9-billion of planned industrial expansion under certificates of necessity—and what it contains isn't all to the good.

On the surface, the report paints an encouraging picture. Example: Out of \$9.9-billion of construction planned by 1954, \$4.6-billion has been com-

Source: Defense Production Administration.



## how key industries stand



## Shows Expansion Lagging

pleted. Of this, \$2.3-billion is either already in operation or ready to go at a moment's notice.

But one big factor not reflected in the report is that the goals are being revised upwards. Chemical targets have already been increased and the aluminum goal is almost certain to go higher.

Only a few industries—such as alka-

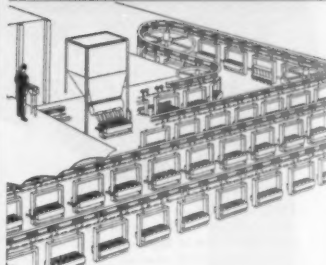
lies and chlorine, synthetic fibers, and cement—are ahead of schedule. Most others, including steel, aluminum, machinery, and aircraft, are lagging. Another sore spot is that some of the programs have got out of kilter. For example, blast furnace capacity should be completed prior to steel works. The report shows things aren't working out that way.

# 2 MEN

produce

# 18 TONS

## BRASS INGOTS PER SHIFT



By conventional methods adding 18 tons of ingots to plant capacity would have increased the payroll by 20 men per shift and required considerable more foundry space.

It was done with just 2 additional plant men in a space approximately 50 feet by 100 feet.

### HOW?

1. By the scientific integration of processing and materials handling.
2. By designing the plant structure and the integrated processing equipment concurrently, thus eliminating all structural obstacles.

This is a typical MHS project showing what can be done to achieve PRODUCTION CONTROL with maximum economy. If you have such a problem, we might be able to contribute some usable ideas—no obligation, of course.

**Mechanical Handling Systems, Inc.**



4610 NANCY AVE. • DETROIT 12, MICH.

OFFICES IN PRINCIPAL CITIES

In Canada:

Canadian Mechanical Handling Systems, Ltd.

## eye-catching INDUSTRIAL JEWELRY

Dramatic miniatures of your products or trademark can now be reproduced in fine detail and incorporated into handsome, useful gifts by Bastian's skilled jewelry craftsmen. Excellent for salesmen, jobbers, retail salesmen, convention souvenirs.

**MONEY CLIPS • LAPEL EMBLEMS • LIGHTERS  
KEY CHAINS  
TIE BARS**



**FREE SAMPLE** Send us your problem... we'll submit ideas and sketches without charge... also show you samples of Bastian's specialties created for America's leading industries.

**REPRESENTATIVES IN PRINCIPAL CITIES**

**BASTIAN BROS. CO.**  
840 BASTIAN ST.  
ROCHESTER, N. Y.

## HUNDREDS OF NEW PROFIT SOURCES



yours today in  
the New 1952  
treasury of  
"NEW PRODUCTS  
AND SERVICES"

This exciting new Journal of Commerce 80-page handbook lists and describes 1,000 new money-making lines by 750 manufacturers. Yours to use, sell, produce or compete with. Get your copy now—then follow the daily "New Products" column in The Journal of Commerce. Your copy sent free with trial subscription of J-of-C—10 weeks for only \$5, a saving of \$2.50. Mail coupon now—keep track of new profit sources.

### THE NEW YORK Journal of Commerce

53 Park Row, New York 15, N. Y.  
Send me the J. of C. for the next 10 weeks plus my copy of "New Products and Services." Check for \$5 is enclosed.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_ W-10

## CHECKLIST:

### Defense Regulations

The following listing and condensed description cover all the materials and price-control regulations issued by the defense agencies during the preceding week.

Full texts of the materials orders may be obtained from National Production Authority, Washington 25, or from any Dept. of Commerce regional office.

Full texts of the price orders may be had from the Office of Price Stabilization, Washington 25, or from the regional OPS office in your area.

### Materials Orders

**Basic priorities**—Suspends the use of all DO ratings on primary paper and paper-board except six reserved exclusively for the military and Atomic Energy Commission and for filling machine tool orders. Also expands the list of DO ratings used to obtain basic chemicals by adding "machine tool" symbols. NPA Reg. 2, Dir. 3, as amended (Jan. 8).

**Construction**: Permits Federal Civil Defense Administration to process its own construction applications, assign ratings, and issue allotments of steel, copper, and aluminum. Del. 14, Amdt. 2 (Jan. 8).

**Consumer durables**: Regroups products listed in Schedule I of M-47B according to their allotment levels as well as their relationship to other consumer goods to make the flexibility provisions (shifting of controlled materials from one product to another in same group) consistent with first-quarter 1952 allotments of controlled materials. M-47B, Amdt. 1 (Jan. 14).

### Pricing Orders

**Cooperative refunds**: Extends from 30 to 120 days the time for producer-owned farmer cooperatives to file reports with OPS on refunds to members of their share of total gross revenue derived from increases in ceiling prices of products processed from agricultural commodities. GCPR, Amdt. 28 (eff. Jan. 12).

**Machinery resellers**: Permits the reseller to determine his ceiling price by using the highest percentage markup or lowest discount that he realized during the Apr. 1-June 24, 1950, period rather than his last markup or discount. CPR 67, Amdt. 7; Del. of Authority 22 revised (eff. Jan. 12).

**Wholesale paper merchants**: Permits wholesalers to maintain the percentage

margins over costs of goods and service sold by them that they had in effect from Jan. 1 to Mar. 31, 1951. CPR 112 (eff. Jan. 14).

**Soft drinks**: Permits retailers of bottled soft drinks to use the pass-through provisions of GCPR and adjust their prices for increased costs in the same manner as already authorized for other food commodities. GCPR, SR 43, Amdt. 2 (eff. Jan. 14).

**White potatoes**: Establishes dollars-and-cents ceilings on potatoes at country shipping points and at wholesale levels. Retail ceilings will be established in the near future. CPR 113; GCPR, SR 15, Amdt. 6 (eff. Jan. 19).

**Soaps and tallow**: Lowers ceilings on all soaps, cleaners, and synthetic detergents, including those sold for household purposes, to the average prices prevailing during November, 1951. This affects sales at distribution, manufacturer, wholesaler, and retailer levels. CPR 10, revised; CPR 6, Amdt. 11 (eff. Jan. 14).

**Lead acid storage batteries**: Permits manufacturers of lead acid storage batteries to reflect increases in costs for lead, certain lead materials, and parts made of lead. CPR 30, SR 6 (eff. Jan. 14).

**Raw wool**: Rolls back raw wool ceilings to take effect within 90 days to an average of slightly more than 20% below ceilings established last May under CPR 35, Rev. 1; CPR 20, Amdt. 2 (eff. Apr. 8).

**Tire carcasses**: Reduces ceiling prices on four-ply passenger car tire carcasses and establishes a premium of \$1 for six-ply carcasses, at wholesale and retail. GCPR, SR 49, Amdt. 2 (eff. Feb. 11).

**Corn gluten feed**: Establishes specific dollars-and-cents ceiling prices at the processor and distributor levels for feed by-products of the wet corn milling industry. GCPR, SR 86 (eff. Jan. 11).

**Intermediate distributors**: Permits intermediate distributors to refigure their ceilings by applying the same percentage markup they formerly received on an article to its new dollars-and-cents net cost. Retailers refigure ceilings the same way. GCPR, SR 29, Amdt. 6 (eff. Jan. 16).

**Sales to U.S. territories and possessions**: Provides that shippers may use the same percentage sales markups to each territory and possession that they received on the same commodities during the base period Jan. 1, 1949 to June 30, 1950. CPR 61, SR 1 (eff. Jan. 16).

**Can closing machinery**: Authorizes lessors of can closing machinery and equipment to increase ceiling prices to the level charged by American Can Co. and Continental Can Co., Inc. CPR 114 (eff. Jan. 16).

# CREATING NEW WEALTH FOR AMERICA

INTERNATIONAL MINERALS & CHEMICAL CORPORATION



International's Potash Mine, Carlsbad, New Mexico, one of more than forty International mines and plants in twenty-one states from coast to coast



In expanding the output of food and manufactured goods that are so essential to America's continuing prosperity, industry and agriculture depend on basic minerals and chemicals produced by *International*.

**INTERNATIONAL MINERALS & CHEMICAL CORPORATION**

*General Offices: 20 North Wacker Drive, Chicago 6*

PHOSPHATE • POTASH • COMPLETE PLANT FOODS • CHEMICALS • AMINO PRODUCTS

# THIS "SALESMAN'S" JOB

**BUSINESS PUBLICATIONS**  
THE WAY TO CUT SALES COSTS

**MECHANIZED SELLING**  
WHEN YOUR ADVERTISING DOES ITS JOB (STEPS 1, 2, 3 AND 6) YOUR SALESMAN HAS MORE TIME FOR STEPS 4 AND 5.

1	2	3	4	5	6
				CLOSE THE ORDER	
			MAKE SPECIFIC PROPOSAL		

**BUSINESS PUBLICATIONS**  
THE WAY TO CUT SALES COSTS

**MECHANIZED SELLING**  
WHEN YOUR ADVERTISING DOES ITS JOB (STEPS 1, 2, 3 AND 6) YOUR SALESMAN HAS MORE TIME FOR STEPS 4 AND 5.

1	2	3	4	5	6
				CLOSE THE ORDER	
			MAKE SPECIFIC PROPOSAL		



# IS TO CONDITION THE PROSPECT

YOUR ADVERTISING in the business magazine your prospect reads works *ahead of* ... *between* ... and *after* your salesman calls.

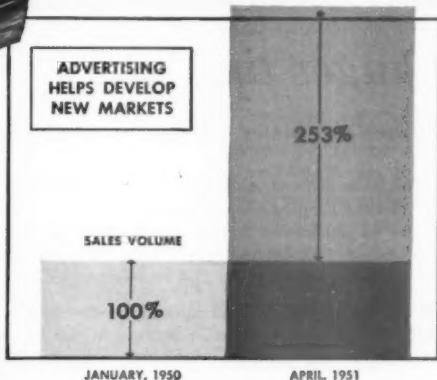
It is your assistant "salesman." It can talk to thousands of your prospects, arouse interest in, and create a preference for, your product or service ... at pennies per call. We call this "Mechanized Selling" because it applies the high speed, low cost tools of business paper advertising to the preliminary steps—the **CONDITIONING** steps of selling—and permits your salesman to make the maximum and most effective

use of his valuable time to S-E-L-L.

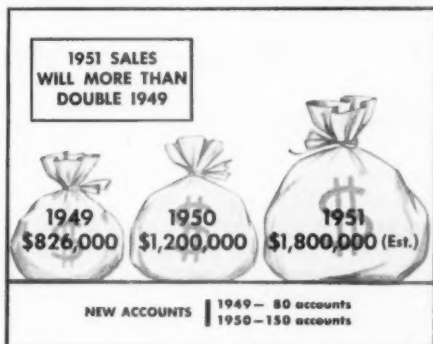
Oversold? Consistent advertising in properly selected business magazines will build recognition and maintain buyer acceptance for your product. Remember—tomorrow's markets must be cultivated today and every day until tomorrow.

Ask your McGraw-Hill man for a copy of our 20-page booklet, "Mechanizing Your Sales With Business Paper Advertising." Also about our sound-slide film ... "Mechanized Selling—Blueprint for Profits" which is available for showing at sales meetings.

## HOW "MECHANIZED SELLING" DEVELOPED NEW MARKETS AND INCREASED SALES



A glass fiber insulation producer wanted to open up new markets. To "condition" his prospects, he used business paper advertising ... direct mail ... catalogs ... and a slide film. Results: volume increased 253% ... advertising cost per dollar of sale \$0.0157.



"Mechanized Selling"—consistent advertising schedules in business magazines, plus direct mail and publicity, helped this manufacturer of electric wiring harnesses and assemblies develop new customers ... double his dollar sales volume.

**McGRAW-HILL PUBLISHING COMPANY, INC.**



330 WEST 42nd STREET, NEW YORK 36, N. Y.



HEADQUARTERS FOR BUSINESS INFORMATION



## *Power at your finger tip*

Nearly everything you do today is done easier, quicker and better—thanks to electricity

If you are an average American worker you use the strength of nine horses each working hour of the day.

**WHERE DO YOU GET SUCH POWER**—Merely by flicking a switch . . . for by that simple act you are tapping the vast sources of electric energy that are ready to work for all of us in the home and on the job.

Today, the use of electric power has grown to where a single factory uses more electricity than an entire city used a generation ago. And your home—with its electric appliances, lighting and other conveniences—consumes more power than was used in yesterday's factory.

**NEW MATERIALS WERE NEEDED**—This great progress could not have been achieved without the many new and better materials which make possible today's larger and more efficient power generating equipment.

**A JOB FOR ALLOY STEEL**—Giant turbines and generators, for example, couldn't stand up under terrific heat,

pressure, wear and corrosion if it weren't for steels made tough<sup>4</sup> and enduring by alloying metals.

Improved plastics also do their part in better insulation and protective coatings. And carbon brushes are as vital to huge generators as they are to your vacuum cleaner motor.

**FOR MORE POWER**—Developing and producing alloys, plastics, carbons and many other better materials for our power industry are but a few of the many ways in which the people of Union Carbide serve all of us.

**FREE:** Learn more about the interesting things you use every day. Write for the illustrated booklet "Products and Processes" which tells how science and industry use the ALLOYS, CARBONS, CHEMICALS, GASES and PLASTICS made by Union Carbide. Ask for booklet A.

# UNION CARBIDE

## AND CARBON CORPORATION

30 EAST 42ND STREET  NEW YORK 17, N. Y.

—UCC's Trade-marked Products of Alloys, Carbons, Chemicals, Gases, and Plastics include—

ELECTROMET Alloys and Metals • HAYNES STELLITE Alloys • NATIONAL Carbons • ACHESON Electrodes • PYROFAX Gases • EVEREADY Flashlights and Batteries  
BAKELITE, KRENE, and VINYLITE Plastics • PREST-O-LITE Acetylene • LINDE Oxygen • PRESTONE and TREK Anti-Freezes • SYNTHETIC ORGANIC CHEMICALS

# INTERNATIONAL OUTLOOK

**BUSINESS WEEK**  
**JANUARY 19, 1952**

**A**  
**BUSINESS**  
**WEEK**  
**SERVICE**

Washington is of two minds about handling the truce stalemate in Korea and the new threat to Southeast Asia.

On the one hand, there's growing opposition to a limited war policy in the Far East.

On the other, few officials or politicians are ready to gamble on an all-out war against Red China.

Both the Administration and Congress are impatient to get U. S. troops out of Korea. The threat of a new "Korea" in Indo-China has strengthened this feeling. Nobody wants to be bogged down in Asia when election day rolls around.

Truman, in particular, wants to get the boys home by November. He has about decided to pull most of the GI's out of Korea in a hurry if there's a truce.

The South Korean Army, which is growing stronger every day, would then hold the fort. But the real guarantee against a new invasion—in theory, at least—would be a U. S. threat of air and naval retaliation against mainland China.

The same threat might be used as a deterrent in Indo-China.

If the Chinese Reds launch another attack in Korea, or move into Indo-China, this kind of retaliation could easily lead to world war. For the Chinese almost certainly would call for Russian help under the Sino-Soviet alliance.

But the keystone of Western policy is to try to avoid world war—even at the cost of a whole series of limited wars. That's where the bomb-China theory runs into trouble.

Also, Britain and France might balk, even though they are desperately anxious to save Southeast Asia.

There's still a \$6.5-billion gap in Western Europe's arms program—between the estimated cost of rearmament and the money that's likely to be available to pay for it. Here's the balance sheet:

- Total cost of rearmament through July, 1954: \$66.5-billion.
- Europe's contribution: \$41.4-billion. U. S. aid: \$18.6-billion.
- Deficit: \$6.5-billion.

But top planners of the North Atlantic Treaty Organization talk down the importance of the red ink. They say that the 1954 target was set high to encourage maximum performance. So little, if any, gap may actually appear.

Still, some observers are bothered. They wonder whether Europe can get anywhere near the arms target.

For example, Britain may be forced to chop \$300-million off its 1952 arms budget, maybe more. The French may have to choose between pulling out of Indo-China or cutting back defense spending at home.

And in Washington, Congress seems in a mood to cut down the three-year U. S. aid figure that NATO is now counting on.

The U. S. is having trouble getting some countries to swallow the bilateral agreements that go with American aid.

Arms shipments to Iran already have been cut off because Premier Mossadegh balks at supporting U. S. defense aims.

# INTERNATIONAL OUTLOOK (Continued)

**BUSINESS WEEK**  
**JANUARY 19, 1952**

Eire almost certainly will refuse U. S. aid rather than sign an agreement. Burma may do the same.

All these countries want to stay neutral in the cold war.

First payoff of the Churchill visit is a U. S.-British swap of metals.

- The U. S. will sell the British 1-million tons of steel this year. (Churchill asked for 1.5-million.)

- Britain is lending the U. S. 25,000 tons of aluminum, which Canada will produce this year for British account. The U. S. will pay this back in 1953.

- Washington will buy 20,000 tons of Malayan tin at \$1.18 a lb. (page 23). That's more than the U. S. has been willing to fork up for the metal until now. But it's far less than Bolivia and Malaya have been asking.

In British eyes, this deal alone makes Churchill's trip a great success.

For a country in Britain's economic fix, 1-million tons of steel is worth several hundred million dollars of extra aid. Right now the steel shortage is throttling British exports.

Steel shipments from the U. S. won't end the shortage. But they should boost British production, including defense output, from 4% to 5%.

It's Britain's aluminum fabricating industry that takes the rap in Churchill's deal.

For example, the Tube Investment group's new fabricating plant, Europe's largest and most modern, already is operating at only 10% of capacity.

This plant was built with an understanding (from ex-Chancellor Cripps) that the government would allocate enough raw material for volume production.

But apparently government officials today are rationing aluminum strictly according to previous consumption.

Britain's commercial banks have about exhausted the cushion they traditionally keep against losses from dropping security prices. The banks' inner reserves have now been used up to meet the big slump in government securities that started after Churchill came to office.

True, most British banks some time ago foresaw that Labor's cheap money policy couldn't last. So they switched gradually from long-term to short-term bonds.

But the sudden loss of reserves has shocked British bankers, has made them especially cautious about extending credit. And that's sure to turn Chancellor Butler's tight-credit screw down still more.

There's a chance that the paralyzing political crisis in France will end soon. The hope turns on the Socialists.

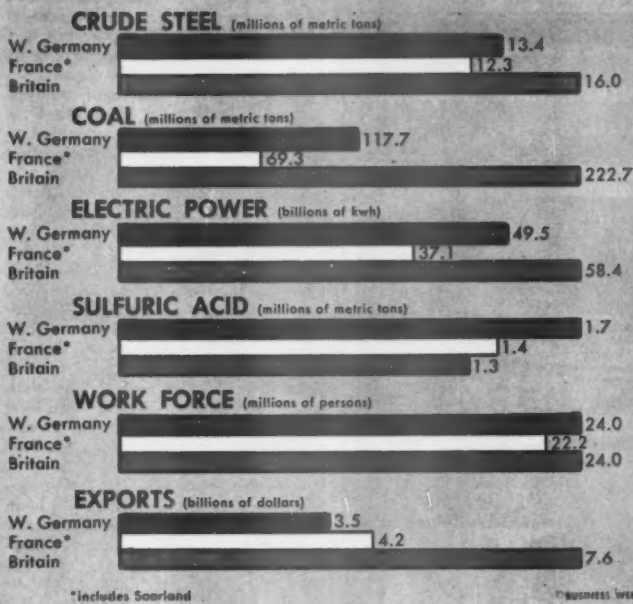
Middle-of-the-roads are urging the Socialists to join a new coalition government so the plan for a joint European army can be pushed through. They say that would justify the life of a new government, even if it accomplished nothing else.

The Socialists support the European army plan. But before they join a new government, they want a guarantee that the budget won't be balanced by cutting down on social services.



# BUSINESS ABROAD

## 1951 Scorecard for West Germany



## West Germany: It's Big-Time

Recovery has put it ahead of France as an industrial power—and close on Britain's heels. If Germans are ready to play ball, it's a big break for the West.

West Germany is now the strongest industrial power of continental Europe. It's even running Britain a close race. That's the result of Bonn's sensational economic gains in 1951. Latest German production and trade figures (chart, above) remove any doubt about the facts.

For the Atlantic alliance, this German recovery holds both a promise and a threat. The promise: a big addition of economic and military strength. The threat: a new German attempt to lord it over the European economy.

• **Reassurance**—At the moment, the outlook is for greater German strength along with more German cooperation. Last week the parliament at Bonn approved the Schuman Plan to put German coal and steel resources in a pool with France, Benelux, and Italy. On paper, at least, that settles the age-old French-German feud.

But West Germany's neighbors will keep their fingers crossed for a year or two at least. The French, in particular, fear the Germans will try to take over the coal-steel pool. And there is no doubt the Germans are joining up at a time when their confidence and ambition are at a postwar high.

• **1951 Record**—Well they might be. During 1951 West Germany chalked up an amazing economic record:

• By the end of the year, industrial production was running at better than 140% of 1936, a gain of more than 10 points over 1950. In 1948 the figure was 51%.

• Steel production for the year was about 13.4-million metric tons, more than that of France and the French-controlled Saar combined.

• Coal output reached nearly 120-million metric tons.

• Exports totaled about \$3.5-billion,

enough to match imports. (In 1950 exports were \$2-billion, imports \$2.7-billion.)

• **Threat?**—This record, especially in steel, begins to look to the French like a threat. German steel output may reach a rate of 17-million tons a year by the end of 1952. It's waiting only for the Allies to take the wraps off the Thyssen and Salzgitter steel works. And that's due to happen as soon as the Schuman Plan gets going. Steel output could easily reach 20-million tons by the end of 1953 if enough capital is available.

West Germany will play a bigger role in coal, too. Smoothing the way for Bundestag approval of the Schuman Plan was a recent Allied agreement to drop the Ruhr Authority, once the coal-steel pool is formed. That means West Germany will control its coal exports before long. And it will go into the pool with its prewar coal marketing monopoly pretty much intact.

If German coal production can be boosted way up in the next year or two, the Ruhr would really have a whip hand in the Schuman Plan. For France would then have to take more coal from Germany, to replace the high-cost coal it's now buying from the U.S.

• **Exports**—West Germany's record is even more impressive in exports than in production. A 75% gain was made last year. The biggest expansion came from the metalworking industries—machinery, machine tools, motor vehicles, etc. The electrical industry boosted its exports from a 1950 total of 323-million marks to 725-million marks. The chemical industry also contributed a lot, and not just in heavy chemicals. Exports of synthetic fibers brought in 80-million marks in 1951, compared with 29-million marks in 1950.

Germany's biggest market was in Western Europe itself, where German goods took a big lead over British in most lines. In South America, the Middle East, and even the sterling area, the Germans also made hay, often at Britain's expense.

German exports to the U.S. also went up—from \$102-million in 1950 to about \$250-million in 1951.

• **Hard to Repeat**—There's little chance West German exports can chalk up as many gains in 1952 as they did in 1951. For one thing, the Germans were helped out by a series of good breaks last year.

• The worldwide, post-Korean buying scramble choked U.S. and British industry with orders, sent many buyers to Germany.

• As British plants began to fill up with defense orders during the second

# clues

is BUSINESS WEEK'S own classified advertising section. You can use it effectively and economically to offer or seek business opportunities—positions—personnel.

## Will Build Buildings On Lease Back Basis Anywhere in the United States

Industrial, office buildings and warehouses, super markets built to your plans and specifications on long term lease back basis. We have built and leased for National Concerns. List will be sent on request. Low Rentals. Write—

DONALD SHANEDLING  
HENRY SHANEDLING SONS CORP.  
1201 South Turner's Road Minneapolis 3, Minn.  
Phone Gregham 5-8849

*The most complete line available*

**Moore Metlhed Maptacks**

AT STATIONERY AND MAP STORES



Plant of American Phenolic Corporation. Size 160 x 420 ft.  
Clear span floor space is supplied by timber trusses.

*Your  
money's worth*

## in Permanent Industrial Construction

The modern industrial building you see here is a typical example of heavy timber construction which gives the owner full value for his building investment. Specifically here is what he gets:

- High grade, permanent construction
- Handsome appearance
- Moderate construction costs
- Effective resistance to destruction by fire

At Timber Structures, Inc. the finest of structural framing units are readily available without restriction. They are "factory-made" by glued lamination—formed to exact dimensions and free of seasoning action. Installed in the building they "stay put" without maintenance.

Ask us to show you how timber construction will give permanent plant and warehouse buildings at moderate cost and without delay. See your nearest Timber Structures office; or fill in and mail the coupon for illustrated booklet, "Engineered Timber Construction".

### TIMBER STRUCTURES, INC.

P. O. BOX 3782-E, PORTLAND 8, OREGON

Offices in New York, Chicago, Detroit,  
Kansas City, Dallas, Seattle, Spokane  
Timber Structures, Inc. of California  
Oakland, Calif.

Timber Structures of Canada, Ltd.  
Peterborough, Ontario

Local Representatives throughout the U.S. and Canada

### TIMBER STRUCTURES, INC.

P. O. Box 3782-E, Portland 8, Oregon

Please send me a copy of booklet,  
"Engineered Timber Construction".

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

Zone \_\_\_\_\_

State \_\_\_\_\_

half of last year, the Labor government advised Commonwealth countries to buy more in Western Europe.

• Since German industry has no defense contracts, it can "sell delivery dates," even when its prices are higher than British or American.

The West German economy as a whole has also benefited from a series of three good harvests. A bad harvest could push the food import bill way up. The country now buys 40% of its food, or \$1.3-billion, from abroad.

In addition, West Germany was still getting financial help from the U.S. last year. Economic aid amounted to \$400-million, or more than any other Marshall Plan country received.

• Credit for Comeback—Still, there's no doubt that the West Germans deserve most of the credit for their economic comeback. Economic Minister Erhardt's free economy policy has paid off by promoting a spirit of enterprise.

West Germany has followed the opposite road from Britain's welfare state policy. The postwar construction effort has gone into rebuilding plants and equipment, even while workers were still living in cellars. Despite this, German labor has put in long work hours and has refrained from rocking the boat by excessive wage demands.

Erhardt's policy has had one big disadvantage. It has left Germany's basic industries short of capital. Resources have gone into light industry and services, while heavy industry so far has tried in vain to get enough capital to replace its obsolete equipment.

• Big Ifs—U.S. experts are split when it comes to predicting what Germany's fate would be if the world seller's market ended in a year or two. One group thinks a recession would hit German exports hard, make it tough for Bonn to pay for its food imports. Unlike Britain, they point out, West Germany has no protection such as the sterling area.

The other group thinks the West Germans could hang onto their world markets anyhow, now that world inflation has brought them back.

What's more, this group argues, a deflation in world markets would improve West Germany's terms of trade by pushing down the prices of food and raw materials faster than prices of manufactured goods.

Whether deflation or continued inflation is in the cards for the next few years, West Germany has a combination of basic economic resources that no other European country has—great coal resources, a big steel plant, and a disciplined labor force that's willing to work hard for relatively low wages. If a desire to cooperate with its neighbors has now been added to this combination, West Germany will prove a tremendous asset to the Atlantic alliance.

# Want to Start Something?

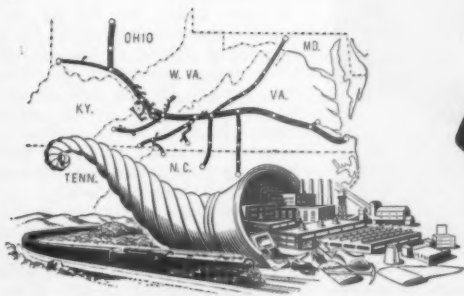


If you're blueprinting a new plant, look to the *Land of Plenty*\* where natural and man-made advantages team up for excellent location and satisfactory operation.

Let the Norfolk and Western's Industrial and Agricultural Department give you reliable, up-to-the-minute facts about this fast-growing industrial region — a variety of raw materials . . . dependable, home-rooted manpower . . . swift, safe transportation service by the Norfolk and Western Railway . . . adequate power and industrial water . . . world's finest Bituminous Coal . . . fair real estate values . . . reasonable tax structures . . . clean, progressive communities . . . mild climate . . . nearness to domestic markets . . . easy access to foreign markets through the great year-round, ice-free Port of Norfolk on Hampton Roads . . . and room to grow.

*These are the factors which can help you to keep the cost of production and distribution at reasonable figures.*

Write the Industrial and Agricultural Department, Drawer B-425, Norfolk and Western Railway, Roanoke, Virginia. All inquiries handled promptly and in confidence.



## Norfolk and Western RAILWAY

SERVING THE SIX GREAT STATES OF THE LAND OF PLENTY

\* VIRGINIA • WEST VIRGINIA • OHIO  
NORTH CAROLINA • MARYLAND • KENTUCKY



**GUERRILLA WAR** reaches into the sleepest villages—this one is near Saigon. France depends on local militiamen, like the ones above, to help 180,000 French and colonial regulars, plus 60,000 Vietnamese troops, hold off the Communists.



**WATCHTOWERS** guard village crossroads from sudden, hit-and-run attacks of rebels.

## Indo-China

The "little war" in Indo-China is changing. For five years, it's been a guerrilla war of ambush and withdrawal, of time-bombs in crowded cities, of lonely watchtowers at village crossroads, of patrols doggedly stalking enemy nests in the jungle. Lately, however, the Communist-led Vietminh forces have begun to attack in strength, showing signs of organization and tactical training. New, modern equipment is on hand, transforming what was a rag-tag band of irregulars into a tough, almost-professional army.

Western leaders are worried and puzzled by the changing pattern. There are reports of 200,000 to 350,000 Red Chinese troops massing on the Indo-China border, of new airfields and new rail links with Soviet supply sources. In Paris, Soviet spokesman Vishinsky has hinted darkly of what will happen when "events begin to take their course in Southeast Asia."

• **Blackmail, Or . . .**—It may be that Stalin and his Chinese friends are up to their old blackmail game—threatening an assault on Indo-China in order to bludgeon concessions out of the West in Korea and in Europe. At





**PATROL** of Vietnamese regulars cuts through jungle muck in never-ending task of routing out the enemy.



**EMPEROR:** French have installed Bao Dai as Chief of State of Vietnam, hope he'll rally native support from the Communists.

## Will All-Out War Replace Ambuscades?

worst, it may be that an all-out Chinese invasion is in the works, or at least a gradual infiltration of Chinese "volunteers." Mao Tse-tung makes no bones about his desire to control the rice bowl and raw material producing areas of Southeast Asia; with Indo-China in his hands, Thailand, Burma, and Malaya would be easy pickings.

For the past two weeks, U.S., British, and French officials at the highest levels have been weighing the evidence. Here are some of their reactions:

- French Foreign Minister Schuman said France would welcome a truce in Indo-China. There's even talk of France pulling out of the war—though some observers figure that's a lever to get Washington to kick in more aid.

- Churchill and Truman issued a communique stating that they would work closely together in the Far East. Foreign Secretary Eden went further, warned Peiping and Moscow that the West would meet future "Koreas" as they met the first—with force.

- French general Alphonse-Pierre Juin, in Washington last week, asked for large-scale U.S. air and naval aid if attack comes. He'd like to have

promises of U.S. troops, too. Above all, Juin wants a coordinated Western command in Southeast Asia, plus lots more U.S. arms aid.

So far, Washington hasn't made any public commitments. It's certain, though, that we won't promise troops. But if attack comes, the embattled French and native forces will probably get air and naval support; and the Allies will have to do some hard thinking on whether to carry the war to Chinese coastal cities and communications centers, and on whether to use Chiang Kai-shek troops in Southeast Asia.

- **Responsibility**—This much has been decided in the Big Three talks: The Indo-China war is no longer an exclusively French affair. Instead it's a responsibility of the whole Western alliance. It raises the question of how many "Koreas" the West can afford without seriously weakening the defense of Europe. Some statesmen think the only thing to do now is to issue a flat warning to the Kremlin: Stay out of Indo-China or else.

That kind of approach might work, according to many U.S. experts. They reason that Stalin wants out of the

Far Eastern fighting, and that a Chinese adventure to the South might bring on World War III. The huffings and puffings along the Indo-Chinese border may just be a bargaining gambit. Nevertheless, that doesn't rule out the chance of a "seepage" of Chinese volunteers into Indo-China until the balance is shifted against the French.

France today is ill-equipped for any more trouble in Indo-China. The war there is costing \$1-billion yearly, chewing up practically all U.S. aid to France, tying down the flower of the French officer corps. It's an unpopular war at home; French political instability makes it hard for any government to take strong action when it's needed. And right now, France is without a government, thanks to the fall of Premier Pleven's regime.

Just last weekend, French fortunes in Southeast Asia took their severest blow yet. Hard-driving Gen. Jean de Lattre de Tassigny, who took over in Indo-China a year ago and sent the enemy reeling back on its heels, died in Paris. The West will have a tough time finding a leader to replace him in Southeast Asia.

• Briggs & Stratton, the world famous, single-cylinder, 4-cycle, air-cooled gasoline engines are accepted leaders in modern, air-cooled power for machines, tools, appliances.

Briggs & Stratton Corp.  
Milwaukee 1, Wis., U.S.A.

4 CYCLE

**BRIGGS & STRATTON**

GASOLINE ENGINES

the world's most widely used single-cylinder gasoline engines




**LORD BALTIMORE HOTEL**

"Miss Smith? I'll be in Baltimore three days. Better teletype for reservations at the best hotel . . . that's right, the **LORD BALTIMORE HOTEL**"

Teletype: BA263

**Want More SALES From Your ADVERTISING?**

Many concerns grow bigger with the proper advertising plan. The right advertisement, placed in the right publication, in the right size space, at the right time, will bring you greater results.

**MARTIN ADVERTISING AGENCY**  
Newspaper—Magazine—Radio—Television  
154A East 80 St., N. Y. (Ext. 1923) LE 2-4781

## LOOKING

for a  
position?  
personnel?  
business  
opportunity?



Next time try an inexpensive advertisement in the "clues" section (classified advertising) of **BUSINESS WEEK**.

## BUSINESS ABROAD BRIEFS

**Gas strike:** Phillips Petroleum Co. and Husky Oil & Refining, Ltd., have brought in Saskatchewan's largest gas well, in the western part of the province. Potential may be 40-million cu. ft. daily. Two weeks ago, Socony Vacuum found Saskatchewan's first promising medium gravity oil (BW-Jan. 12'52, p. 154).

A new branch bank in Sao Paulo was opened last week by National City Bank of New York. It's the bank's second office in the city, seventh in Brazil, 56th overseas.

**Aluminum:** Bauxite from Reynolds Metals Co. mines in Jamaica will start arriving at the company's Arkansas mills in September. Reynolds hopes for 500,000 tons of bauxite yearly. . . . The first load of Greek bauxite—8,400 tons—has arrived in West Germany where it will be processed into aluminum and sent to the U. S. During 1951, ECA advanced payment for 60,000 tons of bauxite to the Greeks. . . . Australia is buying steel from Japan to build its aluminum plant in Tasmania, to be completed in 1954. Bauxite—80,000 tons yearly—will be imported from India at the start.

A \$65-million wood pulp and newsprint project—two to four mills, 250 miles east of Vancouver—will feed British Columbia's industrial boom. Celgar Development Co., a Celanese Corp. of America subsidiary, will build it as the third phase of Celanese's expansion in western Canada. Previous projects: a cellulose mill at Prince Rupert, B. C., a chemical plant at Edmonton, Alta.

Australia hopes a big foreign outfit will come in and develop its radar industry. It promises fat orders and tax concessions. As an emergency move, the government is stockpiling electronic equipment.

Three British buses, the familiar London Transport double-deckers, will come to the U. S. in March, set off on a cross-country motorcade to stir up 1952 travel to Britain.

**Mexico builds:** The Federal Electricity Commission is going to work on a 200,000 kw. hydroelectric power development—the nation's largest—on the Rio Temascaltepec, west of Mexico City. A \$29.7-million World Bank loan will help out with the financing. . . . The government is lending \$10.5-million to a new firm, Mexicana de Coque y Derivados, to build a coke plant at Monclova. It's to turn out 2,200 tons daily, will lessen Mexico's

dependence on imports. . . . Pemex, the government oil monopoly, will add two cat crackers to its refineries at Ciudad Madero and Minatitlan. They'll increase Mexican gasoline production by 10,000 bbl. daily.

## S. A. Shipping Line Bites into U.S. Trade

Six years ago, private interests in three South American countries—Venezuela, Colombia, and Ecuador—got together to set up a new shipping company, Flota Mercante Grancolombiana. The company is owned 45% each by Venezuela and Colombia, and 10% by Ecuador.

Last week Grancolombiana announced a \$30-million program to build 13 more ships for its line. At the same time it unwrapped plans to extend cargo services to North America's Pacific Coast. All this means that the new company is beginning to move into the heavyweight class in Western Hemisphere shipping.

• **On the Docket**—The line already owns 13 ships, charters 17 others. Canadian Vickers, Ltd., of Montreal, is delivering two new ships this year, has two more on its ways for delivery in 1953. The 13 new ships, costing \$30-million over the next five years, will bring up the number of owned and chartered ships to 47. Each of the new ships is designed primarily for handling general cargo.

Grancolombiana's expansion isn't in hulls alone. When the company started back in 1946, it planned to operate chiefly between Venezuela, Ecuador, Colombia, and the U. S. Since then the service has expanded. Already in operation are six services to North America: (1) three weekly runs out of New York; (2) two services from the Gulf Coast every 10 days; and (3) a run every two weeks from eastern Canadian ports.

Grancolombiana also has a weekly service in conjunction with the Royal Netherlands line, between the three South American countries and Europe. Next on the docket will be new services between Pacific Coast ports of the U. S., Canada, and South America.

• **"Regulating Influence"**—Dr. Alvaro Diaz, one of the founders and now general manager of the company, claims that Grancolombiana has been the chief "regulating influence" in bringing down or stabilizing shipping rates among the countries it serves. As far as business goes, company officials say they now "carry to Venezuela, Ecuador, and Colombia combined, more tonnage from the U. S. and Canada than any other line serving the same countries."

# ADVERTISERS IN THIS ISSUE

Business Week—January 19, 1952

ADAMS & WESTLAKE CO.	95
Agency—Hurst & McDonald, Inc.	
THE ADDRESSOGRAPH-MULTIGRAPH CORP.	101
Agency—The Graveland-Balsman Co.	
AEROGUIP CORP.	92
Agency—Hoscraft-Keller, Inc.	
AEYNA BALL & ROLLER BEARING CO.	93
Agency—Marsteller, Gohardt & Reed, Inc.	
AIR MAZE CORP.	144
Agency—Barton, Barton, Dursline & Osborn, Inc.	
ALL-YEAR CLUB OF SOUTHERN CALIFORNIA	128
Agency—Foster, Cone & Belding	
AMERICAN CAN CO.	41
Agency—Young & Rubicam, Inc.	
AMERICAN MAGAZINE	84-85
Agency—Campbell-Ewald Co., Inc.	
F. E. ANDERSON OIL CO.	151
Agency—Fuller & Smith & Ross, Inc.	
ARMCO STEEL CORP.	149
Agency—N. W. Ayer & Son, Inc.	
ATLAS POWDER CO.	49
Agency—The Aikin-Kryet Co.	
"AUTOMATIC" SPRINKLER CORP. OF AMERICA	
Agency—G. M. Hasford Co.	
BALDWIN-LIMA-HAMILTON CORP.	105
Agency—Ketchum, MacLeod & Groves, Inc.	
BANKERS BOX CO. & CO.	84
Agency—Christopher Williams & Bridges	
THE BABCOCK CO.	80
Agency—James Thomas Chirum Co.	
BASTIAN BROTHERS CO.	188
Agency—Hart-Conway Co., Inc.	
BELDEN MFG. CO.	4
Agency—The Freshco Co.	
BELLOWS CO.	100
Agency—Halsey & Co., Inc.	
BITYMINOUS COAL INSTITUTE	110-111
Agency—Benton & Bowles, Inc.	
BREUER ELECTRIC MFG. CO.	107
Agency—Griffin & Dettle	
BRIGGS & STRATTON CORP.	170
Agency—Klaus-Van Pieterom-Dunlap Assoc., Inc.	
BRITISH INDUSTRIES FAIR	188
Agency—Hewitt, Ogilvy, Benson & Mather, Inc.	
CHARLES BRUNING CO.	130
Agency—James Thomas Chirum Co.	
BUELL ENGINEERING CO., INC.	132
Agency—Hicks & Greitt, Inc.	
BUFFALO FORGE CO.	72
Agency—Meirvin P. Hall Adm., Inc.	
BURROUGHS ADDING MACHINE CO., INC.	81
Agency—Campbell-Ewald Co., Inc.	
CARBOLOY CO., INC.	122
Agency—Brooke, Smith, French & Dorrance, Inc.	
CELANESE CORP. OF AMERICA	83
Agency—Elliott & Co., Inc.	
CESSNA AIRCRAFT CO.	47
Agency—Gardner Adm. Co.	
CHASE NATIONAL BANK, INC.	70-71
Agency—Hewitt, Ogilvy, Benson & Mather, Inc.	
CHRYSLER CORP., DODGE DIV.	79
Agency—Euse Roy, Inc.	
CLAPP & POLAK	112
Agency—James H. Flanagan Adm. Agency	
COLORADO FUEL & IRON CORP.	9
Agency—Doyle, Kilchen & McCormick, Inc.	
COLUMBIA STEEL & SHAPING CO.	73
Agency—Walker & Downing, General Agency	
COMMONWEALTH EDISON CO.	76
Agency—J. R. Pershall Co.	
CONTAINER CORP. OF AMERICA	3rd Cover
Agency—N. W. Ayer & Son, Inc.	
CONTINENTAL MOTORS CORP.	138
Agency—Cummings & Hopkins	
CORRY-JAMESTOWN MFG. CO.	88
Agency—Walker & Downing, General Agency	
CUMMINS-CHICAGO CORP.	80
Agency—Aubrey, Finley, Marley & Hodgson, Inc.	
CUTLER-HAMMER, INC.	88
Agency—Kirkman-Drew	
DAVIDSON CORP.	96
Agency—Marsteller, Gohardt & Reed, Inc.	
DEARBORN CHEMICAL CO.	34
Agency—The Graveland-Balsman Co.	
DIAMOND POWER SPECIALTY CORP.	142
Agency—Witte & Burden Adm.	
DITTO CORP.	88
Agency—Tim Morrow & Co.	
DOUGLAS FIR PLYWOOD ASSOC.	36
Agency—The Cobden Co., Inc.	
DOW CHEMICAL CO.	7
Agency—MacManus, John & Adams, Inc.	
DOWELL, INC.	75
Agency—MacManus, John & Adams, Inc.	
DRAKE & TOWNSEND CORP.	134
C. A. DUNHAM CO.	180
Agency—The Buchen Co.	
EASTERN CORP.	78
Agency—Sutherland-Abbott	
THOMAS A. EDISON INC. (EDIPHONE DIV.)	2
Agency—Green Shuman	
ELECTRIC STORAGE BATTERY CO.	10
Agency—Greene-Mantony, Inc.	

EMPLOYERS MUTUAL LIABILITY INS. CO. OF WISC.	60
Agency—Hamilton Adv. Agency, Inc.	
THE FEDERAL BEARINGS CO., INC.	57
Agency—Fred. Witmer	
FEDERAL BUSINESS PRODUCTS, INC.	92
Agency—Morton Freund Adv. Agency, Inc.	
FELT & TARRANT MFG. CO.	143
Agency—N. W. Ayer & Son, Inc.	
THE FIRST BOSTON CORP.	147
Agency—Doramus & Co.	
FRICK CO.	56
Agency—Waynesboro Adv. Agency	
FRIEDEN CALCULATING MACHINE CO., INC.	19
Agency—J. Walter Thompson Co.	
GENERAL AMERICAN TRANSPORTATION CORP.	123
Agency—Weiss & Geller, Inc.	
GENSLER ELECTRIC CO. (CHEMICAL DEPT.)	2nd Cover
Agency—Benton & Bowles, Inc.	
GLOBE AUTOMATIC SPRINKLER CO., INC.	144
Agency—Marchalk & Pratt Co.	
THE B. F. GOODRICH CO.	4th Cover
Agency—The Graveland-Balsman Co.	
GOODYEAR TIRE & RUBBER CO., INC.	80-87
Agency—Bridges Agency, Inc.	
GRAY MFG. CO.	39
Agency—Erwin, Waser & Co., Inc.	
GRAYHAWK BUTYR CAULKING CO.	43
Agency—Roche, Williams & Cleary, Inc.	
HARTFORD FIRE INS. CO. & HARTFORD	48
Agency—Marchalk & Pratt Co.	
HOMESTEAD VALVE MFG. CO.	80
Agency—Smith, Taylor & Smith, Inc.	
THE HYDRAULIC PRESS MFG. CO.	81
Agency—The Jay H. Malah Co.	
INDUSTRIAL BROWNGHIST CORP.	84
Agency—Fried, Hedrick & Stamer, Inc.	
INLAND STEEL CO.	29
Agency—Weiss & Geller, Inc.	
INTERNATIONAL MINERALS & CHEMICALS CORP.	190
Agency—C. Franklin Brown, Inc.	
JOHNSON & HIGGINS	147
Agency—Doramus & Co.	
JOHNSON SERVICE CO.	82
JONES & LAMSON MACHINE CO.	37
Agency—Henry A. Loudon, Adv. Inc.	
JONES & LAUGHLIN STEEL CORP.	81
Agency—Burlie Dowling & Adams, Inc.	
JOURNAL OF COMMERCE	188
Agency—Charles W. Hoy Co., Inc.	
KEASBEY & MATSON CO.	127
Agency—George-Marston, Inc.	
KELSEY HAYES WHEEL CO.	91
Agency—Doramus & Co.	
KIMBERLY-CLARK CORP.	133
Agency—Foster, Cone & Belding	
THOMAS LAUGHLIN CO.	112
Agency—Simmons, Payson Co., Inc.	
LENIX-HORNEHEADS WAREHOUSE CORP.	143
Agency—Simmons, Payson Co., Inc.	
R. G. LEYOUNEAU, INC.	129
Agency—Andrews Agency, Inc.	
THE LORD BALTIMORE HOTEL	178
Agency—Sherry Adv. Corp.	
LUXEM STEEL CO.	11
Agency—Fuller & Smith & Ross, Inc.	
MARINE OFFICE OF AMERICA	48
Agency—Prince & Co., Inc.	
MARSH & McLENNAN, INC.	98
Agency—Doramus & Co.	
MARTIN ADVERTISING	170
THE MASON BOX CO.	144
Agency—Howard-Watson Co.	
McGILL MFG. CO., INC.	38
Agency—The Jacus Co., Adv.	
McDRA-HILL BOOK CO., INC.	182
Agency—The Graveland-Balsman Co.	
MECHANICAL HANDLING SYSTEMS, INC.	187
Agency—Witte & Burden	
MEYAL CARBIDES CORP.	182
Agency—Meek & Thomas, Inc.	
METRO-CLARK CORP.	182
Agency—Sutherland-Abbott	
MINNEAPOLIS-HONEYWELL REGULATOR	35
Agency—Young & Rubicam, Inc.	
THE RICHMOND ART BRONZE CO., INC.	183
Agency—Jaso-Or Co.	
THE MILLS CO.	67
Agency—Meerwams, Inc.	
MILPRINT, INC.	68
Agency—Baker, Johnson & Dickinson	
MINNEAPOLIS-HONEYWELL REGULATOR	64-65
Agency—Foster, Cone & Belding	
MINNESOTA MINING & MFG. CO.	99
Agency—Green Shuman	
MODINE MFG. CO.	184
Agency—Klaus-Van Pieterom-Dunlap Assoc., Inc.	

MOORE PUSH-PIN CO.	188
Agency—Chas. A. White Jr. & Co.	
MORGAN STANLEY & CO.	180
Agency—Doramus & Co.	
NATIONAL BLANK BOOK CO.	115
Agency—Sutherland-Abbott	
NATIONAL CASH REGISTER CO.	12-13
Agency—McManus, John & Adams, Inc.	
NATIONAL MOTOR BEARING CO., INC.	103
Agency—L. C. Cole Co.	
NEW DEPARTURE DIV. GENERAL MOTORS CORP.	20
Agency—Albert Frank-Gunther Law, Inc.	
NORFOLK & WESTERN RAILWAY CO.	167
Agency—Houck & Co.	
NORTON COMPANY AND BEHR-MANNING CORPORATION	189
Agency—James Thomas Chirum Co.	
OTIS McALLISTER & CO.	182
Agency—Albert Frank-Gunther Law, Inc.	
PATERNON PARCHMENT PAPER CO.	156
Agency—Platt-Forbes Inc.	
PITTSBURGH PLATE GLASS CO.	14
Agency—Maxon, Inc.	
POTTER & BRUMFIELD	134
Agency—LaGrange & Garrison, Inc.	
PUBLIC SERVICE OF OKLAHOMA	82
Agency—Gibbons Adv. Agency, Inc.	
QUINCY COMPRESSOR CO.	86
Agency—L. W. Eassey Adv. Agency	
RECORDAK CORPORATION (SUB. OF EASTMAN KODAK)	77
Agency—J. Walter Thompson Co.	
REMINGTON RAND, INC.	155
Agency—Lefford Adv. Agency, Inc.	
REYNOLDS METALS CO.	97
Agency—Buchanan & Co., Inc.	
RHINELANDER PAPER CO.	113
Agency—Frank C. Naeher, Inc.	
ROTARY LIFT CO.	84
Agency—Greenhaw & Bush, Inc.	
SACRAMENTO HEARTLAND CALIFORNIA	116
Agency—Chaplin-Daniels	
SCOTT PAPER CO.	123
Agency—J. Walter Thompson Co.	
HENRY SHANDELING BOND CORP.	186
THE STEELCAST MFG. CORP.	42
Agency—Rothrauff & Ryan, Inc.	
SURFACE COMBUSTION CORP.	184
Agency—Beeson-Berchert, Inc.	
TENNESSEE PRODUCTS & CHEMICAL CORP.	186
Agency—The Graveland-Balsman Co.	
THE THERM SHOVEL CO.	30
Agency—Homer Adv. Inc.	
TIMBER STRUCTURES, INC.	186
Agency—Simon & Smith Adv.	
TIMKEN ROLLER BEARING CO.	85
Agency—Barton, Barton, Dursline & Osborn, Inc.	
TINNEMAN PRODUCTS, INC.	50
Agency—Meldrum & Fawcett, Inc.	
THE TODD CO.	134
Agency—The Merrill Anderson Co., Inc.	
TOLEDO SCALE CO.	137
Agency—Henson-Belchert, Inc.	
TRUSCON STEEL CO.	124
Agency—Meldrum & Fawcett, Inc.	
UNION ASBESTOS & RUBBER CO.	31
Agency—William Hart Adler, Inc.	
UNION CARBIDE & CARBON CORP.	182
Agency—J. M. Mathis, Inc.	
UNION MUTUAL LIFE INSURANCE CO.	89
Agency—Simmons, Payson Co., Inc.	
UNITED STATES RUBBER CO.	5
Agency—Fletcher H. Richards, Inc.	
U. R. STEEL CORP.	83
Agency—Barton, Barton, Dursline & Osborn, Inc.	
UP-RIGHT SCAFFOLDS	80
Agency—Norton M. Jacobs Adv. Agency	
VEEDER-ROOT, INC.	3
Agency—Sutherland-Abbott	
VIKING PUMP CO.	120
Agency—Walter E. Battenfield Co.	
WASSILL ORGANIZATION, INC.	129
Agency—Publication Services, Inc.	
WESTERN ELECTRIC CO.	1
Agency—Cunningham & Walsh, Inc.	
WESTINGHOUSE ELECTRIC CORP.	117
Agency—Fuller & Smith & Ross, Inc.	
WESTINGHOUSE ELECTRIC CORP. (STURTEVANT DIV.)	8
Agency—Fuller & Smith & Ross, Inc.	
DAVID WEBER CO.	148
Agency—Julius G. Pollack Co.	
WOMAN'S DAY	129
Agency—Parke & Parr Adm.	
WORTHINGTON PUMP & MACHINERY CORP.	121
Agency—James Thomas Chirum Co.	
WYANDOTTE CHEMICALS CORP.	65
Agency—N. W. Ayer & Son, Inc.	
YALE & TOWNE MFG. CO.	84
Agency—Rothrauff & Ryan, Inc.	
YAWMAN & ERBE MFG. CO.	78
Agency—Charles L. Rumrill & Co., Inc.	

# The Schuman Plan—Dream to Reality

Of all the ideas born of the postwar anxiety over the future of Europe, none seemed less likely to survive its own announcement than the so-called Schuman Plan.

Back in May, 1950, the French foreign minister, Robert Schuman, startled the world by calmly proposing that France and Germany, and four other European nations, pool their coal and steel resources. He envisioned nothing less than a supranational economy with respect to these basic requirements for modern industry, with tariffs, subsidies, multipricing, quotas, and all the other debris in the channels of international trade dredged away.

It took a while for such a radical idea to penetrate the mores of the nations concerned. But last month the Plevén government was able to get the French Chamber of Deputies to ratify the 50-year treaty embodying the plan. Last week Chancellor Adenauer of the West German Republic put ratification through the Bundestag at Bonn with a good margin to spare. Of the other nations involved, the Netherlands has already approved, while Belgium, Luxembourg, and Italy are expected to move soon.

Bonn's action means the Schuman Plan is over the last big hurdle. It will inaugurate a "European Coal and Steel Community" among six nations with a total population of 155-million. It will bring about 40-million tons of steel capacity into one economic unit—as much as Russia and her satellites, second only to our own enormous output.

This is a truly historic event. It is hard for one generation to sense in its time the beginnings of a tremendous historical sequence. But there is every reason to believe that the Schuman Plan, in bringing together France and Germany in this way, is one of these seed events.

To Americans disposed to write off their European partners, the reality of the Schuman Plan should be an arresting fact. European nations are not hopelessly going to stew in their own juice to their own extinction. There is still a vitality beneath the crust of weariness and cynicism and it is driving Europe to seek its destiny on a larger stage, in a wider citizenship.

The Schuman Plan idea means, too, that we are seeing before our eyes how European unity will come. It will not come overnight out of a great conclave called to draw up a new constitution for a new union. It will come about rather as the final result of steps such as the Schuman Plan and the European Army, bold yet limited, radical yet practical. In the executive, or High Authority, set up to administer the coal-steel pool, in the Council created by the participating nations to check on the executive, and in the High Court to settle disputes—the treaty provides a design for what one

day may be the government of a greater political and economic unity.

In supporting the Schuman Plan the American government has been right from the beginning. It should be a major purpose of our foreign policy to aid it and similar projects such as the European Army. In helping our partners find release for their still great powers in broader associations, we help them, ourselves, and all the free world.

## And the Wheelbarrows?

Funny stories are part of a politician's stock in trade, but sometimes they backfire. One day earlier this month Attorney General McGrath went into the White House glum, came out smiling. Asked by reporters why the change, he said there once was a Soviet military plant that kept losing supplies. Guards at the gate were told to search everyone who came through. One workman wheeled straw out every day. The guards went to work on him. Day after day he brought the straw, day after day the guards took each straw apart. No luck, no loot.

At the end of a year one of the guards was ordered off to Siberia. He told the workman he'd like to know his secret and promised no exposure.

"I have been stealing the wheelbarrows," was the worker's explanation.

McGrath said that the moral of that story is "that things are not always what they seem." Maybe so, but his story strikes us as a singularly ill-chosen one to come from a high official around whom so much public controversy swirls. After all, even though the straw concealed no theft, the wheelbarrows were being stolen.

## Babies for Business

Add to 1951 records the bumper baby crop, biggest in the nation's history. Between Jan. 1 and Dec. 31 almost 4-million new babies hit the sheets and set up a howl for milk, diapers, and bassinets.

More of them came than ever before, more of them will live longer. All this adds up to business. The fact is that this 1951 crop will need some 240-million pairs of shoes before they come of age, and underwear enough to clothe 20 Chicagos.

And they will go on needing. When they are six the school boards will face a sudden rush for new primary space, their becoming 16 will be evident in the garages as well as in the clothing trade. When they are 26 they will be stirring up a housing crisis.

Bumper wheat and cotton crops, greater productivity are all good for business, but a bumper baby crop is better. That is what sends the family shopping—and for years and years.



## Socrates ON DOING RIGHT OR WRONG

GREAT IDEAS OF WESTERN MAN

... ONE OF A SERIES

A man who is good for anything ought not to calculate the chance of living or dying; he ought only to consider whether in doing anything he is doing right or wrong. . . . For neither in war nor yet at law ought I or any man to use every means of escaping death. . . . The difficulty, my friends, is not to avoid death, but to avoid unrighteousness. . . . Wherefore, O judges, be of good cheer about death, and know of a certainty that no evil can happen to a good man in life or after death.

(From Plato's *Apology*)



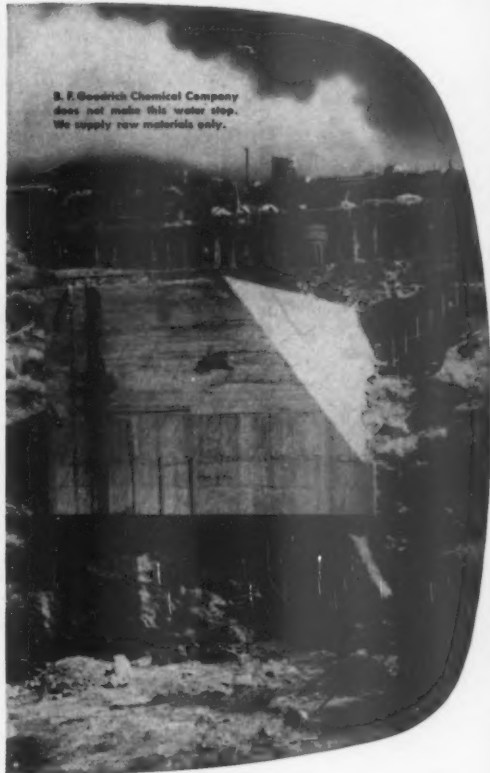
CONTAINER CORPORATION OF AMERICA



Artist: Gyongy Kepes

**Another new development using**

**B. F. Goodrich Chemical Company raw materials**



B. F. Goodrich Chemical Company  
does not make this water stop.  
We supply raw materials only.

## Bright Idea at a Dam Site!

*A dramatic example of GEON'S versatility!*

DAMS are built in huge concrete sections and there has always been trouble where two blocks join. Strip copper and other materials were used as water stops to prevent leakage when the concrete shrinks. Some proved unsatisfactory or too costly—then an engineer developed this water stop made of Geon polyvinyl plastic, shown above.

This extruded water stop comes in lengths of 100 feet and is cut up by a saw or knife to the right length. It is easy to install—sections are simply welded together by applying a torch or electric

knife to the ends and pushing together. Because it is made of Geon, the water stop resists chemical action of concrete, temperature changes and is economical in both labor and materials.

This principle of Geon plastic joint seal may start you thinking of other uses where Geon's many advantages fill the bill.

For versatile Geon materials—including resin, latex and compounded plastics—have hundreds of uses. They resist heat and cold, weather, aging, and most chemicals. They take any color, brilliant or delicate as desired. Perhaps Geon ma-

terials can help you solve a problem, improve or develop a product. We'll help with technical advice. For information, please write Dept. A-1, B. F. Goodrich Chemical Co., Rose Building, Cleveland 15, Ohio. In Canada: Kitchener, Ontario. Cable address: Goodchemco.



**GEON RESINS • GOOD-RITE PLASTICIZERS . . . the ideal team to make products easier, better and more saleable.**

**GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers • HARMON organic colors**